| Code    | Course name  | Credits | Curriculum period 2023 - 2026 |             |              |
|---------|--|---------|-------------------------------|-------------|--------------|
|         |  |         | 2023-24                       | 2024-25     | 2025-26      |
| PAP301  | Seminar in Particle Physics and Astrophysical Sciences | 5 cr    | I-IV                          | I-IV        | I-IV         |
| PAP302  | Open problems in modern astrophysics                   | 5 cr    | 1-11                          | I-II        | 1-11         |
| PAP303  | Statistical Inverse Methods                            | 5 cr    | III-IV                        | III-IV      | III-IV       |
| PAP304  | Plasma Physics   | 5 cr    | 1                             | 1           | 1            |
| PAP305  | Space Applications of Plasma Physics                   | 5 cr    | II                            | Ш           | 11           |
| PAP306  | Advanced Course in Observational Astronomy I           | 5 cr    | I                             | l I         | I            |
| PAP307  | Advanced Course in Observational Astronomy II          | 5 cr    | IV                            | not offered | IV           |
| PAP308  | Special Course in Observational Astronomy              | 5 cr    | 1-11                          | 1-11        | 1-11         |
| PAP309  | Interstellar Matter                                    | 5 cr    | not offered                   | П           | not offered  |
| PAP311  | Small Bodies in the Solar System                       | 5 cr    | 1-11                          | not offered | 1-11         |
| PAP312  | Time Series Analysis in Astronomy                      | 5 cr    | 1-11                          | not offered | 1-11         |
| PAP313  | Variable Stars   | 5 cr    | not offered                   | 1-11        | not offered  |
| PAP314  | Introduction to light scattering                       | 5 cr    | IV                            | not offered | IV           |
| PAP315  | Computational light scattering                         | 5 cr    | not offered                   | 1           | not offered  |
| PAP316  | Astrophysical light scattering problems                | 5 cr    | not offered                   | IV          | not offered  |
| PAP317  | Galactic dynamics                                      | 5 cr    | not offered                   | III-IV      | not offered  |
| PAP318  | Galaxy formation and evolution                         | 5 cr    | not offered                   | I-II        | not offered  |
| PAP319  | High Energy Astrophysics                               | 5 cr    | not offered                   | III-IV      | not offered  |
| PAP320  | Radiative Transfer                                     | 5 cr    | I                             | not offered | I            |
| PAP321  | Solar Physics  | 5 cr    | not offered                   | III         | not offered  |
| PAP323  | Advanced Space Plasma Physics                          | 10 cr   | III-IV                        | not offered | III-IV       |
| PAP324  | Numerical Space Physics                                | 5 cr    | not offered                   | IV          | not offered  |
| PAP325  | Introduction to Particle Physics II                    | 5 cr    | П                             | Ш           | II           |
| PAP326  | Cosmology II   | 5 cr    | II                            | Ш           | 11           |
| PAP327  | Particle Physics Phenomenology                         | 5 cr    | III-IV                        | not offered | III-IV       |
| PAP328  | Laboratory course on instrumentation                   | 5 cr    | 1-11                          | I-II        | 1-11         |
| PAP329  | Particle Physics Experiments                           | 5 cr    | not offered                   | III-IV      | not offered  |
| PAP331  | Computing Methods in High Energy Physics               | 5 cr    | III-IV                        | III-IV      | III-IV       |
| PAP332  | Introduction to Particle Physics I                     | 5 cr    | 1                             | 1           | I            |
| PAP334  | Statistical Methods                                    | 5 cr    | 1-11                          | 1-11        | 1-11         |
| PAP338  | Gaseous radiation detectors and scintillators          | 5 cr    | 1-11                          | not offered | 1-11         |
| PAP339  | Semiconductor radiation detectors                      | 5 cr    | III-IV                        | not offered | III-IV       |
| PAP340  | Physics of semiconductor devices                       | 5 cr    | not offered                   | III-IV      | not offered  |
| PAP344  | Introduction to the Physics of Neutrinos               | 5 cr    | IV                            | not offered | IV           |
| PAP346  | Path Integral Quantization of Gauge Field Theories     | 5 cr    | not offered                   | IV          | not offered  |
| PAP347  | Theories beyond the standard model                     | 5 cr    | III                           | not offered | III          |
| PAP348  | General relativity I                                   | 5 cr    | III                           | III         | III          |
| PAP349  | General relativity II                                  | 5 cr    | IV                            | IV          | IV           |
| PAP351  | Stellar magnetic activity                              | 5 cr    | III-IV                        | not offered | III-IV       |
| PAP352  | Galaxy Survey Cosmology                                | 5 cr    | not offered                   | III         | not offered? |
| PAP353  | Gravitational Lensing                                  | 5 cr    | not offered                   | IV          | not offered? |
| PAP354  | Space and Astrophysical Plasma Turbulence              | 5 cr    |                               | II          | not offered  |
| PAP4141 | Cosmological Perturbation Theory I                     | 5 cr    |                               | not offered | not offered? |
| PAP4142 | Cosmological Perturbation Theory II                    | 5 cr    | IV                            | not offered | not offered? |