

## Courses offered in the Department of Environmental Sciences

**Catalogue Year: 2021-2022**

| Core Courses  |      |  |                        |         | Elective Courses / Specialization(s) (if any)   |      |  |                        |         |
|---|------|--|------------------------|---------|---|------|--|------------------------|---------|
| Core Courses  | Cr.H | Remarks/<br>Prerequisite (if any)              | Offered in<br>Semester | Remarks | Elective<br>Courses   | Cr.H | Pre.Req                                | Offered in<br>Semester | Remarks |
| ENVR151/PHY S 151*  | 3    | Not recommend for 1st semester freshmen        | Fall & Spring          |         | ENVR 160/CHEM 160*  | 4    | Intermediate/A Level Chemistry         | Fall & Spring          |         |
| ENVR 201  | 4    |  | Fall & Spring          |         | ENVR 221/PHYS 221*  | 4    | PHYS 103                               | Fall                   |         |
| ENVR 210/GEOG 210*  | 3    | (offered by Geog)                              | Fall & Spring          |         | ENVR 240/GEOG 240*  | 3    | (offered by Geog)                      | Spring                 |         |
| ENVR 212/STAT 212*  | 3    | (offered by Stat)                              | Fall & Spring          |         | ENVR 252  | 3    |  | Fall & Spring          |         |
| ENVR311/CHEM311*  | 4    | Open to Juniors and seniors (offered by Chem)  | Fall & Spring          |         | ENVR 255/PHYS 255*  | 3    | PHYS 100 or PHYS 102                   | Fall                   |         |
| ENVR 323/BIOL 323*  | 4    | (offered by ENVR)                              | Fall & Spring          |         | ENVR 304  | 3    |  | Spring                 |         |
| ENVR 345/GEOG 345*  | 3    |  | Fall                   |         | ENVR 305  | 4    |  | Fall                   |         |
| ENVR 411/BIOL411*   | 3    | Open to all programs under Biological Sciences | Fall                   |         | ENVR 306/ECON 303*  | 3    | ECON 101                               | Fall                   |         |
| ENVR 413  | 3    |  | Spring                 |         | ENVR 308  | 3    |  | Fall                   |         |
| ENVR 340/CHEM 340*  | 3    | CHEM 100 or Chemistry at Intermediate/A Level  | Fall & Spring          |         | ENVR 309  | 3    |  | Spring                 |         |
| <p><b>Note:</b></p> <p><b>Requirements of Major: 48 credit hours including 33 Major core courses and at least 15 credit hours from Major elective courses to meet total 48. Zero credit Internship (ENVR498) is compulsory from 2021 Fall</b></p> <p><b>Total CGPA and Major GPA 2.0 above</b></p> <p><b>Total credits 126 above</b></p> <p><b>And at least 12 courses from upper level courses (6 from Major core + 6 from electives). So need to select at least 6 from 300~400 level major electives/non-major free electives</b></p> <p><b>Requirements of Minor:</b> Students wishing to do minor should take Core Courses as given and a minimum of three (3) Elective Courses of 300 or 400 level.</p> <p><b>Core courses:</b> ENVR 201, ENVR 311/CHEM311*, ENVR 323/BIOL 323*, ENVR 411, ENVR 340/CHEM 340*</p> <p><b>Elective Courses:</b> ENVR 304, ENVR 305, ENVR 306/ECON 303*, ENVR 308, ENVR 309, ENVR 311/CHEM 311*, ENVR 314/GEOG 314*, ENVR 320/CHEM 320*, ENVR 330/CHEM 330*, ENVR 351/PHYS 351*, ENVR 415, ENVR 416, ENVR 417/GEOG 416*, ENVR 442/CHEM 442*, ENVR 451/PHYS 451*, ENVR 452/PHYS 452*, ENVR 474/GEOG 474*, ENVR 498, ENVR 499</p> <p><b>Equivalences(if any) Or Transfer Credits:</b></p> <p><b>Cross-listed Courses:</b> ENVR/PHYS 151*, ENVR 210/GEOG 210*, ENVR 323/BIOL 323*, ENVR 345/GEOG 345*, ENVR 340/CHEM 340*, ENVR 160/CHEM 160*, ENVR 221/PHYS 221*, ENVR 240/GEOG 240*, ENVR 255/PHYS 255*, ENVR 306/ECON 303*, ENVR 311/CHEM 311*, ENVR 314/GEOG 314*, ENVR 320/CHEM 320*, ENVR 330/CHEM 330*, ENVR 351/PHYS 351*, ENVR 417/GEOG 416*, ENVR 442/CHEM 442*, ENVR 451/PHYS 451*</p> <p>Courses for Gen.Education: (any recommendation) : ENVR 201 (4)</p> <p>Courses for non-science students: ENVR 201, ENVR 252, ENVR 304, ENVR 305, ENVR 308, ENVR 414</p> |      |  |                        |         | ENVR 314/GEOG 314*  | 4    | GEOG 101 or GEOG 210 (offered by Geog) | Fall                   |         |
|   |      |  |                        |         | ENVR 320/CHEM 320*  | 4    | Open to Juniors and seniors (by Chem)  | Fall                   |         |
|   |      |  |                        |         | ENVR 330/CHEM 330*  | 4    | CHEM 160 or equivalent (by Chem)       | Fall & Spring          |         |
|   |      |  |                        |         | ENVR 351/PHYS 351*  | 3    | PHYS 221                               | Spring                 |         |
|   |      |  |                        |         | ENVR 402  | 3    |  | Fall                   |         |
|   |      |  |                        |         | ENVR 403  | 3    |  | Spring                 |         |
|   |      |  |                        |         | ENVR 405  | 4    |  | Spring                 |         |
|   |      |  |                        |         | ENVR 406  | 3    |  | Fall                   |         |
|   |      |  |                        |         | ENVR 414  | 3    |  | Fall                   |         |
|   |      |  |                        |         | ENVR 415  | 3    |  | Spring                 |         |
|   |      |  |                        |         | ENVR 416  | 4    |  | Fall                   |         |
|   |      |  |                        |         | ENVR 417/GEOG 416*  | 3    | ENVR 240/GEOG 240                      | Spring                 |         |
|   |      |  |                        |         | ENVR 442/CHEM 442*  | 4    | Open to Juniors and seniors            | not offered            |         |
|   |      |  |                        |         | ENVR 451/PHYS 451*  | 3    | PHYS 222                               | not offered            |         |
|   |      |  |                        |         | <p><b>Total Credits required for Major:</b></p> <p><b>Requirements of Major: 48 credit hours including 33 Major core courses and at least 15 credit hours from Major elective courses to meet total 48.</b></p> |      |  |                        |         |

### Mission Statement of your Department: (Key Goals)



Environmental Science is an interdisciplinary subject that draws upon the knowledge from the Biological, Physical, Earth and Social Sciences. Study of the subject gives one the opportunity to find out as to how, we as people, through our use of water, land and energy resources, are affecting our surroundings and the globe at large. Information is also gained about the actions that could be taken to reduce, control and, in some case, reverse the damage caused by us to the environment. The Environmental Sciences Program at FCCU focuses on environmental problems in Pakistan and beyond, and their causes. Through course work, interactive field excursions, and possibly research as well, the students should develop an understanding of the many environmental challenges Pakistan faces. They should get an appreciation of what is required for the conservation, restoration of the environment and what it means to make the environment more sustainable while meeting local, national and international needs.

### Please do mention the higher education opportunities in your respective Major:



A degree in Environmental Sciences from Forman Christian College (A Chartered University) would not only make the graduate a very well informed person about some of the greatest challenges faced by humanity today, but also point to a number of avenues for master & doctoral studies or gainful employment, both locally and overseas, as world-wide demand for such professionals is growing, at an ever increasing rate.

### Mention the Career Opportunities/Career Path:



Career opportunities in Environmental Sciences are immense and are further going to increase in Pakistan and abroad in future. In the public sector, job opportunities include regional and national government agencies, the Environmental Protection Agency, the Department of Natural Resources, Fish & Wildlife Services, National Park Service, National Forest Service, and Food Safety. In private sector, graduates have the opportunity to work in Environmental NGOs, Industry, R&D Organizations, Environmental Consultancy, Environmental Journalism, Education and Social Development