**POKHARA UNIVERSITY**

**Master of Science in Electrical Engineering in Power System program**

**Curricular Structure**

The program is designed to equip students with the competencies, knowledge, skills, and attitudes needed for success in technical positions. The coursework gives students a broad and holistic view of the complexity of technologies concerning different power system analysis and design in today’s world. This is a two-year program spread over four semesters. A student needs to successfully complete 60 credit hours of course work, research and project work and Dissertation for graduation.

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| --- | --- | --- | --- | --- | --- |
| **Year 1, Semester -1** | | | | | |
| S.N. | Course Code | Course | Credit Hours | Contact hours/week | Type |
| 1 | EPS 501 | ComputerAided Power System Analysis | 4 | 6 | C |
| 2 | EPS 502 | Distribution System Planning and Design | 3 | 3 | C |
| 3 | EPS 503 | Advanced Power Electronics | 3 | 5 | C |
| 4 | EPS 504 | Optimization Techniques | 3 | 3 | C |
| 5 | EPS 505 | Power Market and Deregulation | 3 | 3 | C |
|  |  | Total | 16 | 20 |  |

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| --- | --- | --- | --- | --- | --- |
| **Year 1, Semester -2** | | | | | |
| S.N. | Course Code | Course | Credit Hours | Contact hours/week | Type |
| 1 | EPS 551 | Power System Dynamics and Stability | 4 | 6 | C |
| 2 | EPS 552 | Advanced High Voltage Engineering | 3 | 3 | C |
| 3 | EPS 553 | Power System Operation and Control | 3 | 3 | C |
| 4 | EPS 591 | Seminar | 2 | 2 | C |
| 5 |  | Elective I | 3 | 3 | E |
|  |  | Total | 15 | 17 |  |

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| --- | --- | --- | --- | --- | --- |
| **Year 2, Semester -1** | | | | | |
| S.N. | Course Code | Course | Credit Hours | Contact hours/week | Type |
| 1 | EPS 601 | Power System Reliability | 3 | 3 | C |
| 2 | EPS 602 | Engineering Project Planning and Management | 3 | 3 | C |
| 3 | EPS 603 | Project | 2 | 2 | C |
| 4 |  | Elective II | 3 | 3 | E |
| 5 |  | Elective III | 3 | 3 | E |
|  |  | Total | 14 | 14 |  |

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| --- | --- | --- | --- | --- | --- |
| **Year 2, Semester -2** | | | | | |
| S.N. | Course Code | Course | Credit Hours | Contact hours/week | Type |
| 1 | EPS 691 | Dissertation | 15 | 15 |  |
|  |  | Total | 15 | 15 |  |
|  | | Total Credits | 60 |  |  |

**Elective Courses**

**Elective I**

|  |  |
| --- | --- |
| **Course Code** | **Course** |
| EPS 571 | Advanced Electrical Drives |
| EPS 572 | Dynamic Modeling of Electrical Machines |
| EPS 573 | Flexible AC Transmission Systems |
| EPS 574 | Micro Controller and DSP based System Design |

**Elective II**

|  |  |
| --- | --- |
| **Course Code** | **Course** |
| EPS 631 | Advance Power System Protection |
| EPS 632 | Distributed Generation and Micro Grid |
| EPS 633 | Risk Assessments of Power System |
| EPS 634 | Non-Linear Control System Design |

**Elective III**

|  |  |
| --- | --- |
| **Course Code** | **Course** |
| EPS 641 | Power Quality and Harmonics |
| EPS 642 | Artificial Intelligence Applications in Power System |
| EPS 643 | Social and Environment Impact of Engineering System |
| EPS 644 | Renewable Energy  Sources and Grid Integration |