

**DEPARTMENT OF HYDROLOGY  
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

Program Code:     **33**   **P.G. Diploma/M.Tech. (Surface Water Hydrology)**  
 Department:       **HYN**   **Hydrology**  
 Year:                **I**

| Teaching Scheme             |              |   |              |         | Contact Hours/Week |   |     | Exam Duration |           | Relative Weight (%) |     |     |     |     |
|-----------------------------|--------------|---|--------------|---------|--------------------|---|-----|---------------|-----------|---------------------|-----|-----|-----|-----|
| S. No.                      | Subject Code | Course Title                                      | Subject Area | Credits | L                  | T | P   | Theory        | Practical | CWS                 | PRS | MTE | ETE | PRE |
| <b>Semester- I (Autumn)</b> |              |   |              |         |                    |   |     |               |           |                     |     |     |     |     |
| 1.                          | HYN-516      | Channel and fluvial hydraulics                    | PCC          | 4       | 3                  | 1 | 2/2 | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 2.                          | HYN-526      | Deterministic hydrology                           | PCC          | 4       | 3                  | 1 | -   | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 3.                          |              | Programme Elective Course -I                      | PEC          | 4       | -                  | - | -   | -             | -         | -                   | -   | -   | -   | -   |
| 4.                          |              | Programme Elective Course -II                     | PEC          | 4       | -                  | - | -   | -             | -         | -                   | -   | -   | -   | -   |
| 5.                          |              | Programme Elective Course -III                    | PEC          | 2/4*    | -                  | - | -   | -             | -         | -                   | -   | -   | -   | -   |
|                             |              | Total   |              | 18/20   | 6                  | 2 | 1   |               |           |                     |     |     |     |     |
| <b>Semester-II (Spring)</b> |              |   |              |         |                    |   |     |               |           |                     |     |     |     |     |
| 1.                          | HYN-522      | Stochastic hydrology                              | PCC          | 4       | 3                  | 1 | -   | 3             | -         | 25                  | 0   | 25  | 50  | 0   |
| 2.                          | HYN-523      | Surface water modeling and simulation             | PCC          | 4       | 2                  | 1 | 2   | 2             | -         | 10                  | 15  | 25  | 50  | 0   |
| 3.                          | HYN-532      | Environmental planning and assessment of projects | PCC          | 4       | 3                  | 1 | -   | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 4.                          | HYN-700      | Seminar   | SEM          | 2       | -                  | - | -   | -             | -         | -                   | -   | -   | 100 | -   |
| 5.                          |              | Programme Elective Course -I                      | PEC          | 4       | -                  | - | -   | -             | -         | -                   | -   | -   | -   | -   |
| 6.                          |              | Programme Elective Course -II                     | PEC          | 4/2*    | -                  | - | -   | -             | -         | -                   | -   | -   | -   | -   |
|                             |              | Total   |              | 22/20   | 8                  | 3 | 2   |               |           |                     |     |     |     |     |

\*Credit requirement for PG Diploma/ I<sup>st</sup> year M.Tech is 40 credits. Only one 2 credit elective course is permitted in any of the semesters.

**DEPARTMENT OF HYDROLOGY  
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

Program Code:     **33**   **P.G. Diploma/M.Tech. (Surface Water Hydrology)**  
 Department:       **HYN**   **Hydrology**  
 Year:               **II**

| Teaching Scheme  |              |   |              |         | Contact Hours/Week |   |   | Exam Duration |           | Relative Weight (%) |     |     |     |     |
|--|--------------|---|--------------|---------|--------------------|---|---|---------------|-----------|---------------------|-----|-----|-----|-----|
| S. No.   | Subject Code | Course Title  | Subject Area | Credits | L                  | T | P | Theory        | Practical | CWS                 | PRS | MTE | ETE | PRE |
| <b>Semester- I (Autumn)</b>  |              |   |              |         |                    |   |   |               |           |                     |     |     |     |     |
| 1.   | HYN-701A     | Dissertation Stage-I<br>(to be continued next semester) | DIS          | 12      | -                  | - | - | -             | -         | -                   | -   | -   | 100 | -   |
|  |              | Total   |              | 12      |                    |   |   |               |           |                     |     |     |     |     |
| <b>Note: Students can take 1 or 2 audit courses as advised by the supervisor, if required.</b> |              |   |              |         |                    |   |   |               |           |                     |     |     |     |     |
| <b>Semester-II (Spring)</b>  |              |   |              |         |                    |   |   |               |           |                     |     |     |     |     |
| 1.   | HYN-701B     | Dissertation Stage-II<br>(contd. From III semester)     | DIS          | 18      | -                  | - | - | -             | -         | -                   | -   | -   | 100 | -   |
|  |              | Total   |              | 18      |                    |   |   |               |           |                     |     |     |     |     |

| <b>Summary</b>                     |              |              |           |           |
|------------------------------------|--------------|--------------|-----------|-----------|
| Semester                           | 1            | 2            | 3         | 4         |
| <b>Semester-wise Total Credits</b> | <b>18/20</b> | <b>22/20</b> | <b>12</b> | <b>18</b> |
| <b>Total Credits</b>               | <b>70</b>    |              |           |           |

**Program Elective Courses (Surface Water)**

| Teaching Scheme |              |   |              |         | Contact Hours/Week |     |     | Exam Duration |           | Relative Weight (%) |     |     |     |     |
|-----------------|--------------|---|--------------|---------|--------------------|-----|-----|---------------|-----------|---------------------|-----|-----|-----|-----|
| S. No.          | Subject Code | Course Title  | Subject Area | Credits | L                  | T   | P   | Theory        | Practical | CWS                 | PRS | MTE | ETE | PRE |
| 1.              | HYN-540      | Water Resources Economics                             | PEC          | 4       | 3                  | 1   | -   | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 2.              | HYN-525      | Water Resources systems                               | PEC          | 4       | 3                  | 1   | -   | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 3.              | HYN-512      | Computer Programming                                  | PEC          | 2       | 1                  | -   | 2   | 1             | -         | 10                  | 15  | 25  | 50  | -   |
| 4.              | HYN-543      | Flood forecasting                                     | PEC          | 4       | 3                  | 1   | -   | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 5.              | HYN-538      | Hydrological data collection, processing and analysis | PEC          | 4       | 3                  | 1   | 2/2 | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 6.              | HYN-537      | Remote sensing and GIS applications                   | PEC          | 4       | 3                  | 1   | 2   | 3             | -         | 10                  | 15  | 25  | 50  | -   |
| 7.              | HYN-551      | Physical Hydrology                                    | PEC          | 4       | 3                  | 1   | -   | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 8.              | HYN-545      | Surface Water quality modeling                        | PEC          | 4       | 3                  | 1   | -   | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 9.              | HYN-546      | Hydroinformatics                                      | PEC          | 4       | 3                  | 1   | 2/2 | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 10.             | HYN-518      | Water resources planning and Management               | PEC          | 4       | 3                  | 1   | -   | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 11.             | HYN-513      | Hydrometeorology and climate change                   | PEC          | 4       | 3                  | 1   | 2/2 | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 12.             | HYN-527      | Groundwater hydrology                                 | PEC          | 4       | 3                  | 1   | 2/2 | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 13.             | HYN-531      | Watershed Behavior and Conservation Practices         | PEC          | 4       | 3                  | 1   | -   | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 14.             | HYN-552      | Numerical methods in hydrology                        | PEC          | 2       | 2                  | 1/2 | -   | 2             | -         | 25                  | -   | 25  | 50  | -   |
| 15.             | HYN-553      | Experimental hydrology                                | PEC          | 2       | -                  | -   | 4   | -             | 2         | -                   | 50  | -   | -   | 50  |
| 16.             | HYN-542      | Urban Hydrology                                       | PEC          | 4       | 3                  | 1   | -   | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 17.             | HYN-554      | Soil and Water Remediation                            | PEC          | 4       | 3                  | 1   | 2/2 | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 18.             | HYN-511      | Hydrologic elements and analysis                      | PEC          | 4       | 3                  | 1   | -   | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 19.             | HYN-555      | Soft-computing techniques in hydrology                | PEC          | 2       | 2                  | 1/2 | -   | 2             | -         | 25                  | -   | 25  | 50  | -   |
| 20.             | HYN-556      | Environmental Quality Lab                             | PEC          | 2       | -                  | -   | 4   | -             | 2         | -                   | 50  | -   | -   | 50  |

**DEPARTMENT OF HYDROLOGY  
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Program Code: **33** P.G. Diploma/M.Tech. (Ground Water Hydrology)  
Department: **HYN** Hydrology  
Year: **I**

| Teaching Scheme             |              |  |              |         | Contact Hours/Week |   |     | Exam Duration |           | Relative Weight (%) |     |     |     |     |
|-----------------------------|--------------|--|--------------|---------|--------------------|---|-----|---------------|-----------|---------------------|-----|-----|-----|-----|
| S. No.                      | Subject Code | Course Title                                 | Subject Area | Credits | L                  | T | P   | Theory        | Practical | CWS                 | PRS | MTE | ETE | PRE |
| <b>Semester- I (Autumn)</b> |              |  |              |         |                    |   |     |               |           |                     |     |     |     |     |
| 1.                          | HYN-527      | Groundwater hydrology                        | PCC          | 4       | 3                  | 1 | 2/2 | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 2.                          | HYN-529      | Geophysical investigations                   | PCC          | 4       | 3                  | 1 | 2/2 | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 3.                          | HYN-535      | Environmental quality                        | PCC          | 4       | 3                  | 1 | 2/2 | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 4.                          |              | Programme Elective Course -II                | PEC          | 4       | -                  | - | -   | -             | -         | -                   | -   | -   | -   | -   |
| 5.                          |              | Programme Elective Course -III               | PEC          | 2/4*    | -                  | - | -   | -             | -         | -                   | -   | -   | -   | -   |
|                             |              | Total  |              | 18/20   | 9                  | 3 | 3   |               |           |                     |     |     |     |     |
| <b>Semester-II (Spring)</b> |              |  |              |         |                    |   |     |               |           |                     |     |     |     |     |
| 1.                          | HYN-528      | Groundwater systems analysis                 | PCC          | 4       | 3                  | 1 | -   | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 2.                          | HYN-560      | Soil and groundwater contamination modelling | PCC          | 4       | 3                  | 1 | 2/2 | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 3.                          | HYN-700      | Seminar                                      | SEM          | 2       | -                  | - | -   | -             | -         | -                   | -   | -   | 100 | -   |
| 4.                          |              | Programme Elective Course -I                 | PEC          | 4       | -                  | - | -   | -             | -         | -                   | -   | -   | -   | -   |
| 5.                          |              | Programme Elective Course -II                | PEC          | 4       | -                  | - | -   | -             | -         | -                   | -   | -   | -   | -   |
| 6.                          |              | Programme Elective Course -III               | PEC          | 4/2*    | -                  | - | -   | -             | -         | -                   | -   | -   | -   | -   |
|                             |              | Total  |              | 22/20   | 6                  | 2 | 1   |               |           |                     |     |     |     |     |

\* Credit requirement for PG Diploma/ I<sup>st</sup> year M.Tech is 40 credits. Only one 2 credit elective course is permitted in any of the semesters.

**DEPARTMENT OF HYDROLOGY  
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Program Code:     **33**   **P.G. Diploma/M.Tech. (Ground Water Hydrology)**  
 Department:       **HYN**   **Hydrology**  
 Year:               **II**

| Teaching Scheme  |              |   |              |         | Contact Hours/Week |   |   | Exam Duration |           | Relative Weight (%) |     |     |     |     |
|--|--------------|---|--------------|---------|--------------------|---|---|---------------|-----------|---------------------|-----|-----|-----|-----|
| S. No.   | Subject Code | Course Title  | Subject Area | Credits | L                  | T | P | Theory        | Practical | CWS                 | PRS | MTE | ETE | PRE |
| <b>Semester- I (Autumn)</b>  |              |   |              |         |                    |   |   |               |           |                     |     |     |     |     |
| 1.   | HYN-701A     | Dissertation Stage-I<br>(to be continued next semester) | DIS          | 12      | -                  | - | - | -             | -         | -                   | -   | -   | 100 | -   |
|  |              | Total   |              | 12      |                    |   |   |               |           |                     |     |     |     |     |
| <b>Note: Students can take 1 or 2 audit courses as advised by the supervisor, if required.</b> |              |   |              |         |                    |   |   |               |           |                     |     |     |     |     |
| <b>Semester-II (Spring)</b>  |              |   |              |         |                    |   |   |               |           |                     |     |     |     |     |
| 1.   | HYN-701B     | Dissertation Stage-II<br>(contd. From III semester)     | DIS          | 18      | -                  | - | - | -             | -         | -                   | -   | -   | 100 | -   |
|  |              | Total   |              | 18      |                    |   |   |               |           |                     |     |     |     |     |

| <b>Summary</b>                     |              |              |           |           |
|------------------------------------|--------------|--------------|-----------|-----------|
| Semester                           | 1            | 2            | 3         | 4         |
| <b>Semester-wise Total Credits</b> | <b>18/20</b> | <b>22/20</b> | <b>12</b> | <b>18</b> |
| <b>Total Credits</b>               | <b>70</b>    |              |           |           |

**Program Elective Courses (Ground Water)**

| Teaching Scheme |              |   |              |         | Contact Hours/Week |     |     | Exam Duration |           | Relative Weight (%) |     |     |     |     |
|-----------------|--------------|---|--------------|---------|--------------------|-----|-----|---------------|-----------|---------------------|-----|-----|-----|-----|
| S. No.          | Subject Code | Course Title  | Subject Area | Credits | L                  | T   | P   | Theory        | Practical | CWS                 | PRS | MTE | ETE | PRE |
| 1.              | HYN-514      | Hydrogeology  | PEC          | 4       | 3                  | 1   | 2/2 | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 2.              | HYN-561      | Multi-phase flow through porous media                 | PEC          | 4       | 3                  | 1   | 2/2 | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 3.              | HYN-539      | Isotope hydrology                                     | PEC          | 4       | 3                  | 1   | 2/2 | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 4.              | HYN-544      | Hydrogeology of hard rocks                            | PEC          | 4       | 3                  | 1   | -   | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 5.              | HYN-522      | Stochastic hydrology                                  | PEC          | 4       | 3                  | 1   | -   | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 6.              | HYN-537      | Remote sensing and GIS applications                   | PEC          | 4       | 3                  | 1   | 2   | 3             | -         | 10                  | 15  | 25  | 50  | -   |
| 7.              | HYN-562      | Irrigation and drainage engineering                   | PEC          | 4       | 3                  | 1   | 2/2 | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 8.              | HYN-545      | Surface Water quality modeling                        | PEC          | 4       | 3                  | 1   | -   | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 9.              | HYN-546      | Hydroinformatics                                      | PEC          | 4       | 3                  | 1   | 2/2 | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 10.             | HYN-518      | Water resources planning and Management               | PEC          | 4       | 3                  | 1   | -   | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 11.             | HYN-513      | Hydrometeorology and climate change                   | PEC          | 4       | 3                  | 1   | 2/2 | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 12.             | HYN-563      | Vadose zone hydrology                                 | PEC          | 4       | 3                  | 1   | 2/2 | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 13.             | HYN-552      | Numerical methods in hydrology                        | PEC          | 2       | 2                  | 1/2 | -   | 2             | -         | 25                  | -   | 25  | 50  | -   |
| 14.             | HYN-553      | Experimental hydrology                                | PEC          | 2       | -                  | -   | 4   | -             | 2         | -                   | 50  | -   | -   | 50  |
| 15.             | HYN-566      | Groundwater protection and regulation                 | PEC          | 2       | 2                  | 1/2 | -   | 2             | -         | 25                  | -   | 25  | 50  | -   |
| 16.             | HYN-554      | Soil and Water Remediation                            | PEC          | 4       | 3                  | 1   | 2/2 | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 17.             | HYN-511      | Hydrologic elements and analysis                      | PEC          | 4       | 3                  | 1   | -   | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 18.             | HYN-538      | Hydrological data collection, processing and analysis | PEC          | 4       | 3                  | 1   | 2/2 | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 19.             | HYN-555      | Soft-computing techniques in hydrology                | PEC          | 2       | 2                  | 1/2 | -   | 2             | -         | 25                  | -   | 25  | 50  | -   |
| 20.             | HYN-556      | Environmental Quality Lab                             | PEC          | 2       | -                  | -   | 4   | -             | 2         | -                   | 50  | -   | -   | 50  |

**DEPARTMENT OF HYDROLOGY  
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

Program Code:     **33**   **P.G. Diploma/M.Tech. (Watershed Management)**  
 Department:       **HYN**   **Hydrology**  
 Year:                **I**

| Teaching Scheme             |              |   |              |         | Contact Hours/Week |   |     | Exam Duration |           | Relative Weight (%) |     |     |     |     |
|-----------------------------|--------------|---|--------------|---------|--------------------|---|-----|---------------|-----------|---------------------|-----|-----|-----|-----|
| S. No.                      | Subject Code | Course Title                                  | Subject Area | Credits | L                  | T | P   | Theory        | Practical | CWS                 | PRS | MTE | ETE | PRE |
| <b>Semester- I (Autumn)</b> |              |   |              |         |                    |   |     |               |           |                     |     |     |     |     |
| 1.                          | HYN-511      | Hydrologic elements and analysis              | PCC          | 4       | 3                  | 1 | -   | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 2.                          | HYN-531      | Watershed behavior and conservation practices | PCC          | 4       | 3                  | 1 | -   | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 3.                          | HYN-537      | Remote sensing and GIS applications           | PCC          | 4       | 3                  | 1 | 2   | 3             | -         | 10                  | 15  | 25  | 50  | -   |
| 4.                          |              | Programme Elective Course -I                  | PEC          | 4       | -                  | - | -   | -             | -         | -                   | -   | -   | -   | -   |
| 5.                          |              | Programme Elective Course -II                 | PEC          | 2/4*    | -                  | - | -   | -             | -         | -                   | -   | -   | -   | -   |
|                             |              | Total   |              | 18/20   | 9                  | 3 | 2   |               |           |                     |     |     |     |     |
| <b>Semester-II (Spring)</b> |              |   |              |         |                    |   |     |               |           |                     |     |     |     |     |
| 1.                          | HYN-571      | Watershed modeling and simulation             | PCC          | 4       | 2                  | 1 | 2   | 2             | -         | 10                  | 30  | 20  | 40  | -   |
| 2.                          | HYN-562      | Irrigation and drainage engineering           | PCC          | 4       | 3                  | 1 | 2/2 | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 3.                          | HYN-700      | Seminar                                       | SEM          | 2       | -                  | - | -   | -             | -         | -                   | -   | -   | 100 | -   |
| 4.                          |              | Programme Elective Course -I                  | PEC          | 4       | -                  | - | -   | -             | -         | -                   | -   | -   | -   | -   |
| 5.                          |              | Programme Elective Course -II                 | PEC          | 4       | -                  | - | -   | -             | -         | -                   | -   | -   | -   | -   |
| 6.                          |              | Programme Elective Course-III                 | PEC          | 4/2*    | -                  | - | -   | -             | -         | -                   | -   | -   | -   | -   |
|                             |              |   |              | 22/20   | 5                  | 2 | 3   |               |           |                     |     |     |     |     |

\* Credit requirement for PG Diploma/ I<sup>st</sup> year M.Tech is 40 credits. Only one 2 credit elective course is permitted in any of the semesters.

**DEPARTMENT OF HYDROLOGY  
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

Program Code:      **33**   **P.G. Diploma/M.Tech. (Watershed Management)**  
 Department:       **HYN**   **Hydrology**  
 Year:               **II**

| Teaching Scheme  |              |   |              |         | Contact Hours/Week |   |   | Exam Duration |           | Relative Weight (%) |     |     |     |     |
|--|--------------|---|--------------|---------|--------------------|---|---|---------------|-----------|---------------------|-----|-----|-----|-----|
| S. No.   | Subject Code | Course Title  | Subject Area | Credits | L                  | T | P | Theory        | Practical | CWS                 | PRS | MTE | ETE | PRE |
| <b>Semester- I (Autumn)</b>  |              |   |              |         |                    |   |   |               |           |                     |     |     |     |     |
| 1.   | HYN-701A     | Dissertation Stage-I<br>(to be continued next semester) | DIS          | 12      | -                  | - | - | -             | -         | -                   | -   | -   | 100 | -   |
|  |              | Total   |              | 12      |                    |   |   |               |           |                     |     |     |     |     |
| <b>Note: Students can take 1 or 2 audit courses as advised by the supervisor, if required.</b> |              |   |              |         |                    |   |   |               |           |                     |     |     |     |     |
| <b>Semester-II (Spring)</b>  |              |   |              |         |                    |   |   |               |           |                     |     |     |     |     |
| 1.   | HYN-701B     | Dissertation Stage-II<br>(contd. From III semester)     | DIS          | 18      | -                  | - | - | -             | -         | -                   | -   | -   | 100 | -   |
|  |              | Total   |              | 18      |                    |   |   |               |           |                     |     |     |     |     |

| <b>Summary</b>                     |              |              |           |           |
|------------------------------------|--------------|--------------|-----------|-----------|
| Semester                           | 1            | 2            | 3         | 4         |
| <b>Semester-wise Total Credits</b> | <b>18/20</b> | <b>22/20</b> | <b>12</b> | <b>18</b> |
| <b>Total Credits</b>               | <b>70</b>    |              |           |           |



**Program Elective Courses (Watershed Management)**

| Teaching Scheme |              |   |              |         | Contact Hours/Week |     |     | Exam Duration |           | Relative Weight (%) |     |     |     |     |
|-----------------|--------------|---|--------------|---------|--------------------|-----|-----|---------------|-----------|---------------------|-----|-----|-----|-----|
| S. No.          | Subject Code | Course Title                                      | Subject Area | Credits | L                  | T   | P   | Theory        | Practical | CWS                 | PRS | MTE | ETE | PRE |
| 1.              | HYN-516      | Channel and fluvial hydraulics                    | PEC          | 4       | 3                  | 1   | 2/2 | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 2.              | HYN-527      | Groundwater hydrology                             | PEC          | 4       | 3                  | 1   | 2/2 | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 3.              | HYN-540      | Water Resources Economics                         | PEC          | 4       | 3                  | 1   | -   | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 4.              | HYN-513      | Hydrometeorology and climate change               | PEC          | 4       | 3                  | 1   | 2/2 | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 5.              | HYN-522      | Stochastic hydrology                              | PEC          | 4       | 3                  | 1   | -   | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 6.              | HYN-551      | Physical Hydrology                                | PEC          | 4       | 3                  | 1   | -   | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 7.              | HYN-545      | Surface Water quality modeling                    | PEC          | 4       | 3                  | 1   | -   | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 8.              | HYN-576      | Rural water supply and Sanitation                 | PEC          | 2       | 0                  | 0   | -   | 2             | -         | 25                  | -   | 25  | 50  | -   |
| 9.              | HYN-526      | Deterministic hydrology                           | PEC          | 4       | 3                  | 1   | -   | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 10.             | HYN-530      | Planning and management of watersheds             | PEC          | 4       | 3                  | 1   | -   | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 11.             | HYN-532      | Environmental planning and assessment of projects | PEC          | 4       | 3                  | 1   | -   | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 12.             | HYN-563      | Vadose zone hydrology                             | PEC          | 4       | 3                  | 1   | 2/2 | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 13.             | HYN-552      | Numerical methods in hydrology                    | PEC          | 2       | 2                  | 1/2 | -   | 2             | -         | 25                  | -   | 25  | 50  | -   |
| 14.             | HYN-553      | Experimental hydrology                            | PEC          | 2       | -                  | -   | 4   | -             | 3         | -                   | 50  | -   | -   | 50  |
| 15.             | HYN-535      | Environmental quality                             | PEC          | 4       | 3                  | 1   | 2/2 | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 16.             | HYN-554      | Soil and Water Remediation                        | PEC          | 4       | 3                  | 1   | 2/2 | 3             | -         | 25                  | -   | 25  | 50  | -   |
| 17.             | HYN-555      | Soft-computing techniques in hydrology            | PEC          | 2       | 2                  | 1/2 | -   | 2             | -         | 25                  | -   | 25  | 50  | -   |
| 18.             | HYN-556      | Environmental Quality Lab                         | PEC          | 2       | -                  | -   | 4   | -             | 2         | -                   | 50  | -   | -   | 50  |