

## School of Physical Sciences PLOs

### Chemistry – M.A./Ph.D.

#### **PLO 1 – Core Knowledge (CK)**

- a) Introductory understanding of the core knowledge is assessed by performance in introductory core course work taken during the first year, and by qualifying exams.
- b) Advanced understanding of core knowledge is assessed by performance in advanced content courses, the advancement to candidacy proposal and exam, annual student-faculty meetings, published papers in peer-reviewed scientific journals, and by the dissertation itself.

#### **PLO 2 – Research Methods and Analysis (RM&A)**

- a) Introductory understanding of research methods and analysis is assessed by performance in course work, qualifying exams, contributions in research teams and learning seminars, and engagement in other professional training opportunities.
- b) Advanced understanding of core knowledge is assessed by performance in advanced courses, learning seminars; advancement to candidacy proposal and exam, annual student-faculty meetings, publications, presentations, dissertation.

#### **PLO 3 – Pedagogy (PED)**

- a) Introductory understanding of pedagogy is assessed by performance in TA training activities.
- b) Advanced understanding of pedagogy is assessed by performance as a Teaching Assistant or Instructor, and in-service activities such as teaching and mentoring.

#### **PLO 4 – Scholarly Communication (SC)**

- a) Introductory skill in scholarly communication is assessed by performance in courses, learning seminars.
- b) Advanced understanding of scholarly communication is assessed by performance on advancement to candidacy proposal and exam, annual student-faculty meetings, dissertation, conference presentations, publications, fellowships, grants, learning seminars.

#### **PLO 5 – Professionalism (PROF)**

- a) Introductory skill in professionalism is assessed by performance in core courses, qualifying exams, learning seminars and participation in department or community service.
- b) Advanced skill in professionalism is assessed by performance on advancement to candidacy exam, learning seminars, conference presentations, publications, fellowship applications and grant proposals,

learning seminars, and participation in department, university, community or professional service, including leadership in organizing professional activities for, or mentoring, earlier stage graduate students.

**PLO 6 – Independent Research (IR)**

- a) Introductory knowledge and skill for independent research is assessed by performance in core courses and on qualifying exams.
- b) Advanced knowledge and skill for independent research is assessed by performance on advancement to candidacy exam, annual student-faculty meetings, publications, conference presentations, grants, fellowships, dissertation, alumni statistics.