

SEMESTER - III**CPS 2c – Part III - PEDAGOGY OF BIOLOGICAL SCIENCE****Credits: 2****Internal: 20 marks****Hours/Week: Theory-2hrs & Practical- 4hrs****External: 30 marks****Total: 50 marks****Course Learning Outcomes:****At the end of the course, the student-teachers will be able to**

- prepare various learning resources to support effective teaching;
- conduct Action Research and disseminate the results;
- arrange various tasks to be executed during field immersion;
- prepare reflective journals on observation of peer teaching;
- prepare reflective journals on co-teaching with mentors;
- design lesson plans in Biological Science;
- prepare teaching learning materials to facilitate teaching in Biological Science;
- acquire skills in teaching competency; and
- prepare reflective journal on School Internship.

Unit I: Learning Resources

Introduction-Botany and Zoology Laboratory-Structure and design-Organization and maintenance of the Biological Science-Laboratory-Maintenance of various Registers- Improvised Apparatus-Science Text book, Qualities of a good Science Text Book- Science Library-Web Based learning-Multimedia, Use of the internet, e-learning, Tele and Video- Conferencing.

Unit II: Action Research

Action Research- Meaning, need for classroom Research- difference between Action Research and Fundamental Research- steps in Action Research- journaling the results of classroom Research.

Unit III: Field Immersion**Tasks of student-teachers during internship:**

- Observation of the teaching of mentor-teachers and peer student-teachers
- Institutional and Individual case study
- Lesson plan, Unit plan and Teaching- Learning Materials
- Question paper and other tools of assessment
- Reflective diary of School Internship
- Co-Scholastic activities
- Teacher as a substitute teacher

Suggested References:

Aggarwal, D.D. (2008). *Modern Method of Teaching Biology*. New Delhi: Karanpaper backs.

Arulselvi, E. (2007). *Teaching of Science*. Chennai: Saradha Publication.

Bhandala, C. & Khanna. (1985). *Teaching Of Science*. New Delhi: Prakash Brothers Educational Publishers.

Bhatnagar, A.D. (2004). *Teaching of Science*. Meerut: Surya Publications.

Buffaloe, N. & Throneberry, J.B. (1972). *Principles of Biology Teaching*. New Delhi: Prentice – Hall of India Limited.

Frost, J. & Turner, T. (2005). *Learning to teach Science in Secondary school*. New York: Routledge Palmer Publication.

Garrett. (1979). *Statistics in Psychology and Education*. Bombay: Vakils, Feffer and Simons Ltd.

Harms, N. & Yager, R. (1981). *What research says to the science teacher* (Vol. 3). Washington: National Science Teachers Association.

Khana, S.D, et al. (1976). *Technology of science teaching*. New Delhi: Doaba House

Natrajan, C. (1997). *Activity Based Foundation Course on Science Technology and Society*. Mumbai: omi Bhaba Centre for Science Education.

Korde & Sawant. (1980). *Science and Scientific Method*. New Delhi: Himalaya Publishing House.

Passi, B.K. (1976). *Becoming a Better Teacher: Micro teaching approach*. Ahemedabad: Sahitya Mudranalaya.

Prasad, J. (1999). *Practical aspects in Teaching of Science*. New Delhi: Kanishka Publication.

Sharma, J. (2006). *Models of Teaching Science*. Jaipur: Raj Publishing House.

Veena Rani Pandey. (2004). *Major Issues in Science Teaching*. Summit Enterprises.

வேணுகோபால்.கோ. நாகராஜன் (2012). உயிரியல் கற்பித்தல், சென்னை: இரா.உமாபாஸ்கரன்.(2007). உயிரியல் கற்பித்தல், சென்னை: சாரதாபதிப்பகம்.

கே.ஆர்.திருவேங்கடசாமி. (2007). உயிர் வாழ்வதும் உயிரிவேதியியலும். சென்னை: கௌரா ஏஜென்ஸிஸ்.

கே.ராஜம்மாள். (2005). உயிரியல் கற்பிக்கும் முறைகள், சென்னை: சாந்தா பதிப்பகம்.

மா.மலர்விழி, மா.உமாமகேஸ்வரி. (2008). உயிரியல் கற்பித்தல். மதுரை: மாநிலா பப்ளிஸர்ஸ்.
