SEMESTER - III

CPS 2c – Part III - PEDAGOGY OF PHYSICAL 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

- classify the various learning resources to support effective teaching;
- execute Action Research and disseminate the results;
- gain clarity on the 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 Physical Science;
- prepare teaching learning materials to facilitate teaching in Physical Science;
- acquire skills in teaching competency; and
- prepare reflective journal on School Internship.

Unit I: Learning Resources

Physics and Chemistry Laboratory- Structure and Design- Organization and maintenance of the Physical Science Laboratory- Maintenance of various Registers: Accession –Consumable - Non-consumable - Issue and Breakage Registers-Storage of Apparatus and Chemicals. Science Textbooks- Qualities of a good Science textbook- Science Library: Encyclopedias- Dictionaries, Magazines, Journals, Activity books, Science fiction, Science learning books. Web-based Learning- Multimedia - use of 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:

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Falvery, P., Holbrook, J.,& Conian, D. (1994). *Assessing Students.* Hongkong: Longman Publications.

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Jenkins, E.W. (2000). *Innovations in Science and Technology Education. Vol. VII*, Paris: UNESCO.

Khana, S.D., Sexena, V.R. Lamba, T.P., & Murthy, V. (1976). *Technology of Teaching*. Doaba Publishing House.

Mangal S.K., & Uma Mangal. (1999). *Essentials of Educational Technology*. New Delhi: PHI Learning (P) Ltd.

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

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Sampath,K.(1981). *Introduction to Education Technology*. Sterling Publishers.

Sharma, P.C. (2006). *Modern Science Teaching*. New Delhi: Dhanpat Rai Publications,

Sharma, R.C. (2009). *Modern Science Teaching*. Meerut: Dhanpat Rai and Sons.

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Yadav, M.S. (2003). *Teaching of Science*. New Delhi: Anmol Publications.

பன்னீர் செல்வம், அ. (2009), இயற்பியல் வேதியியல் கற்பிக்கும் முறைகள். சென்னை: சாந்தா பப்ளிஷர்ஸ்

உமா பாஸ்கரன், T. (2009). பொருளறிவியல் கற்பித்தல் முறைகள் -I. சென்னை: சாரதா பதிப்பகம்.

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