

Course Title: Science Communication
Credits: 2

Course Objectives:

- To introduce students to the importance and fundamentals of science communication.
- To familiarize with the relevant constitutional and policy provisions related to science communication.
- To train students to use different tools and techniques for communicating science to different stakeholders.

Unit 1: Science Communication: Basics

- Definition, importance, role and history of science communication
- Challenges in communicating scientific information to the public
- Science, society and media interactions
- Role and responsibility of different stakeholders
- Scientific method, culture, and thinking/temper
- Role of media in science communication

Unit 2: Science Communication: Policy and Governance

- S&T setup in India
- Constitutional and policy provisions
- Indian policies related S&T and its communication
- Scientific Social Responsibility (SSR)
- Capacity-building and training
- Global scenario
- Perceptions of science and scientists

Unit 3: Science Communication: Tools and Techniques

- Theories and models of science communication
- Approaches, methods and techniques
- Indigenous knowledge and modern science
- Scientific vs journalistic approaches
- Understanding your audience and tailoring messages
- Different formats and channels
- Basics of science writing and reporting
- Structuring a science news story or article
- Simplifying complex scientific concepts
- Storytelling, visuals and multimedia

Suggested Readings:

- Baron, N. (2010). *Escape from the ivory tower: A guide to making your science matter*. Island Press.
- Bertemes, J.P., Haan, S., & Hans, D. (Eds.) (2024), *50 essentials on science communication*. Walter de Gruyter GmbH: Berlin/Boston. DOI <https://doi.org/10.1515/9783110763577>
- Blum, D., Knudson, M., & Henig, R. M. (Eds.). (2006). *A field guide for science writers: The official guide of the National Association of Science Writers* (2nd ed.). Oxford University Press.

- Bucchi, M. & Trench, B. (Eds.). (2014). *Routledge handbook of public communication of science and technology* (2nd Ed.). New York, NY: Routledge.
- Davies, S. R., & Horst, M. (2016). *Science communication: Culture, identity and citizenship*. Palgrave Macmillan.
- Hanganu-Bresch, C. et al. (2022), *The Routledge Handbook of Scientific Communication*. Routledge.
- Holliman, R. et al. (2009), *Practising Science Communication in the Information Age*. Oxford University Press.
- Jamieson, K. H., Kahan, D., & Scheufele, D. A. (Eds.). (2017). *The Oxford handbook of the science of science communication*. Oxford University Press.
- National Academies of Sciences, Engineering, and Medicine. (2017). *Communicating science effectively: A research agenda*. The National Academies Press: Washington, DC.
- Olson, R. (2009). *Don't be such a scientist: Talking substance in an age of style*. Island Press.
- Patairiya, M. (2007), *Vigyan Patrakarita (Hindi)*. Vani Prakashan.
- Rajput, A.S.D. (2018), *Handbook of Science Journalism*. Vigyan Prasar.
- Scott, D. (2020). *Explaining science in the age of public relations*. Routledge.
- Whitaker, R. (2018). *Science communication: A critical guide*. Palgrave Macmillan.
- Wilson, A. (1998), *Handbook of Science Communication*. Routledge.