Place: Pune Date: 05 January 2022

To,

The Head of the Department

Department of Travel & Tourism

Vishwakarma University

Pune - India

**Subject:** Proposal for approval to conduct a short-term training programme (STTP) “R for Beginners: An Introduction to Data Science using R”

Dear Madam,

Through this application, I would like to share with you a proposal for an STTP “R for Beginners: An Introduction to Data Science using R”. R statistical language is a free data science tool. It is used by several famous universities across the globe for data analysis and visualisation. This basic training of R & RStudio will help the participants to explore a new tool for data analysis.

I will be a resource person for all five sessions and Prof Remi Thomas will be a coordinator for this training programme. Appreciation letters are expected from the Vishwakarma University for the roles of resource person and coordinator.

Further details of the schedule, STTP team & session modules are attached. Kindly approve this proposal.

Thanking you

Dr Ajay Kumar Koli

Assistant Professor

Department of Travel & Tourism

Vishwakarma University - Pune

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| **Proposed Schedule for STTP** | |
| STTP Title | R for Beginners: An Introduction to Data Science using R |
| Potential Participants | This is an introductory course. Hence, open for all disciplines. No prior data science knowledge is required. A basic understanding of research and statistics is helpful. |
| Language | English |
| Fee | Rs. 499 per participant  (No charges for Vishwakarma University members) |
| Payment Link |  |
| Registration Form Link | <https://forms.gle/UhZ44QoPCL4hqHYm6> |
| Dates | 24, 25, 27, 28 & 29 Jan. 2022  (Total 5 live sessions) |
| Time | 04:00 PM to 06:00 PM |
| Platform | Google Meet |
| Assessment | Yes  (Assessment 1 on 25 Jan 2022 & Assessment 2 on 29 Jan 2022) |
| E-certificates | Yes  (Satisfactory attendance & on-time submission of both assessments) |
| Feedback Form Link | <https://forms.gle/jw62UKGsfj19TocHA> |

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| **STTP Team** | |
| Roles | Responsibilities |
| **Chief Patron**  Dr Chetan Kapadnis  Prof & Dean  Faculty of Humanities & Social Sciences  Vishwakarma University - Pune | * Extend support to reach a wider audience. * Welcome speech. |
| **Convenor**  Prof Aarti Suryawanshi  Head of Department  Department of Travel & Tourism  Vishwakarma University - Pune | * Extend support to reach a wider audience. * Closing ceremony speech. |
| **Coordinator**  Prof Remi J. Thomas  Department of Travel & Tourism  Vishwakarma University - Pune  Email: [remi.thomas@vupune.ac.in](mailto:remi.thomas@vupune.ac.in)  Mobile: 99708 55213 | * Extend support to reach a wider audience. * Advertise the training flyer and brochure on social media. * Maintaining participants’ records of fee payment, registration & feedback. * To make sure all participants receive the Google Meet link to join the sessions. * Record of circulation and submission of assessments. * Handling payment and registration related queries * Starting, recording and closing the session. * Maintain all documents and records as per the IQAC directions. * Maintain all the records and data related to this STTP and submit the same to IQAC keeping Chief Patron, Convenor & Resource Person in email CC. * Certificate distribution * Attendance record |
| **Resource Person**  Dr Ajay Kumar Koli  Assistant Professor  Department of Travel & Tourism  Vishwakarma University - Pune  Email: [ajay.koli@vupune.ac.in](mailto:ajay.koli@vupune.ac.in)  Mobile: 88868 10879 | * Extend support to reach a wider audience. * Preparation of slides for five modules each for at least two hours. * Delivery of lecture and training at five sessions each of at least two hours. * Correction of the assessments. * Handing queries related to course content and modules |

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| **Session Schedule** | | |
| **Day & Date** | **Module** | **Topics** |
| Day 1  24 Jan 2022  04:00 to 06:00 PM | Introduction to R & RStudio | 1. Why R? 2. Why RStudio? 3. What are R packages? 4. Using RStudio projects 5. R data science framework |
| Day 2  25 Jan 2022  04:00 to 06:00 PM | Dynamic Documents using R Markdown | 1. What is R Markdown? 2. YAML 3. Code Chunk 4. Text 5. Insert images 6. Make tables 7. Mathematics equations |
| Assessment - 1 (25 marks) | | |
| Day 3  27 Jan 2022  04:00 to 06:00 PM | Data Visualisation using ggplot2 | Introduction to ggplot2   1. Aesthetic mapping 2. Geometric objects 3. Colour scales & legends 4. Facets 5. Statistical summaries 6. Position adjustments 7. Maps, Annotations 8. Themes 9. Bar chart, Histogram, Correlogram |
| Day 4  28 Jan 2022  04:00 to 06:00 PM | Data Wrangling using dplyr | 1. Introduction to dplyr and pipes 2. Export and import data sets 3. Levels of measurement of variables 4. Rows selection from data 5. Column selection from data 6. Grouping and summarizing data |
| Day 5  29 Jan 2022  04:00 to 06:00 PM | Slide Crafting using xaringan | 1. Preparing HTML slides using R package xaringan 2. Applying different styles to slides using xaringanthemer 3. Enhancements and extensions for slides using xaringanExtra |
| Assessment - 2 (25 marks) | | |