

Dr. Balram joined the SFU geography department in January 2008. He is currently a Senior Lecturer and an essential faculty member and colleague in the Spatial Information Science program and courses. Dr. Balram has a sustained and long-term track record of excellence in various areas of teaching and learning in Higher Education, including stimulating creating and critical thinking, caring for student learning, presenting complex information, innovation in teaching, excellent teaching, and diversity of courses taught. Highlights of some of these achievements and accomplishments are presented below.

Ability to stimulate students to think creatively and critically: Shivanand has the unique skill and ability to stimulate and facilitate students to think creatively and critically using multiple teaching approaches. His teaching philosophy is deeply rooted in the belief that creative and critical thinking comes from a convincing command of the content, cognitive structuring and knowledge inter-relationships. In order to implement this belief, he uses multiple delivery modes such as humor, technology, body language and a variety of pedagogies to effectively provide a meaningful two-way interactive knowledge stream. One of the tangible elements of his approach to creative and critical thinking is the use of hands-on projects and experiential practical real-world data analysis in all his courses. Students benefit from these projects because the experience reinforces technical concepts, facilitate creative and critical thinking and problem solving, and translate knowledge across the various disciplines. Some students have published academic papers as a result of these class projects. Other students have used their projects to participate in local and Canada-wide student competitions. Some information is at:

<http://www.sfu.ca/geography/news-and-events/news-archives/news-2016/20160413-geog351-multimedia-cartography-geoapps.html> (Shiv's students participate in a Canadian competition)

<http://www.sfu.ca/geography/news-and-events/kudos-archives/kudos-2015/201511118-gis-day-competition.html> (first prize map was created by a student from Shiv's course)

If you ask students who have taken a course with Shivanand they will tell you immediately that he is one of the most engaging instructors they have encountered in their time at SFU. Some have even mentioned they have remained one extra semester so they can take at least one course with him. These student feedback comments are obtained from his end of course evaluation forms.

Demonstrated caring for student learning: He is very approachable and a caring individual who would go out of his way to support student learning. He always maintains a professional and cordial relationship with the students he teaches during their time in the course and for many years afterwards with mentorship support and advice. On the Rate-My-Professors website, which is known as a place where students vent their frustrations and dislikes, it is rare to find any negative comments or feedback for Shivanand. Instead, you see comments with sentiments such as (from 2015): "Shiv was caring, I went to extra office hours as I had 0 idea about statistics and he was very good about explaining it. He has a good sense of humor if you get to know him. Start going to office hours early in the term if you need help." Shivanand has also shown me a number of thank-you cards students send him, all with the general sentiment that "If it was not for professors like yourself, I would never have the opportunity to pursue a program at the graduate level. (Daryn Loader)". Furthermore, Shivanand is making an impact and contribution

to the student learning experiences by serving on teaching and learning committees within SFU and Canada-wide.

Ability to present complex information clearly: His ability to present complex information clearly is effectively demonstrated in the succinct clarity of the course videos he has designed, narrated and posted on his YouTube Channel at: <https://www.youtube.com/user/GISVideosTV>. Further, he uses instructional technologies such as Canvas to manage his courses in terms of weekly structures, student access to lecture notes, sample exam questions, assignments and solutions, and supplementary readings. This structured approach is an effective way to scaffold complex content and course organization so that the student learning experience is enhanced.

Demonstrated enthusiasm for, and innovation in, teaching: Shivanand is passionate about teaching and student learning. Apart from this technical expertise in GIScience, he has taken the time to obtain Certificates in University Teaching and Learning, and in Web-based Learning. In addition, he has attended many SFU TLC training programs to improve his skills and ability to become a more effective teacher. These professional endeavors demonstrate clear enthusiasm to maintain currency in the teaching profession. Shivanand has also designed and taught two new SFU courses (GEOG 650 and GEOG 150) that are intended to meet new student needs. Also, he redesigned an existing course to appeal to a wider range of students and the response was phenomenal: <https://www.sfu.ca/geography/news-and-events/news-archives/news-2016/20160324-geog351-multimedia-cartography.html>. Further, he has designed and delivered a massive open online course (MOOC) as part of his long-term teaching and learning interest in blended learning: <http://www.sfu.ca/fenv/news/geography-delivers-mooc-in-gis.html>. This MOOC is considered to be the first on the topic of GIS to be designed and delivered from within Canada. The results of this work was presented at the 2015 Canadian Association of Geographers meeting in a special session on Education he had organized. In order to motivate high school students into studying geography at SFU, Shivanand visited high schools in his free time and presented GIS lectures to K-12 students. He is also active in the BC Open Campus initiative by participating in textbook reviews for their suitability, and this Fall 2016 term he has adopted one of those textbooks for his course. Shivanand has also obtained small grants to pursue teaching research in blended learning and learning video design and implementation. He is also making an impact in educational research at the Canadian level by currently creating an edited book titled “GIScience and Higher Education: Teaching and learning perspectives in Canada” to be published by Springer in 2017.

Sustained record of excellent teaching: Based on the vast amount of glowing student feedback and comments from both graduate students who he supervised as his course TA and undergraduate students who have taken his courses, it is not surprising that Shivanand’s Teaching Ability score ranks consistently high and above departmental norms in all his courses. This is an exceptional accomplishment since he regularly teaches a wide breadth of quantitative courses - quantitative geography, GIS, remote sensing, multimedia cartography and spatial analysis – where these courses are often perceived by students to be difficult and demanding.

Diversity of courses: The range of content covered by Shivanand in his regular teaching workload is impressive. The departmental norm and expected teaching commitment for Senior Lecturers is six courses per year plus additional services such as supervising undergraduate

students in Directed Studies courses and projects. Shivanand currently teaches or has previously taught content in GIScience, Quantitative Geography and Remote Sensing across all the years in both the undergraduate and graduate programs. Some of these courses were large enrollment courses (~90) in the early years but are now capped due to classroom space. On average, Shivanand's classes are now in the range of 45-55 students which is above norms in the science-based GIS courses. In the lower division courses, students usually come from business, criminology, earth sciences, science, mathematics, etc. and it is due to the teaching expertise of Shivanand that these students from diverse academic backgrounds are all successfully brought to a common GIScience knowledge base before entering the upper division to continue with their studies.

In conclusion, the details above clearly demonstrate that Dr. Shivanand Balram is an exceptional educator. He has a sustained and long-term track record of excellence in various areas of teaching and learning in Higher Education. He deserves to be recognized as an outstanding university geography teacher.