

# What makes a good instrument and how does it affect sound?



Stellenbosch

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**9-20 September 2024**  
**ONLINE | SELF STUDY**  
**R500 course fee**



**Martina Meincken**

I obtained my MSc in Physics from Konstanz, Germany, in 1998 and then completed a six-month internship at the National Accelerator Centre in South Africa. Shifting to Polymer Science, I earned a PhD in 2002. After roles as a postdoc and researcher, I joined the Department of Forest & Wood Science in 2006, becoming an Associate Professor in 2016. My research focuses on Wood Physics & Drying, Wood Plastic Composites, and wood-based materials.

The course will give musicians an understanding of the sound quality of their instrument and why there are differences between instruments. The link between material science and music is currently not covered anywhere and has been identified as an important knowledge gap.

#### **The topics covered include:**

1. Physics of sound
2. Relevant wood properties
3. Acoustical properties of wood
4. Determination of these properties
5. Classification of tonewoods (for all wooden Instruments)
6. The process of making string instruments
7. How to define sound quality in instruments

This course is unique in that it provides a bridge between music studies and materials science studies with a focus on wooden instruments. Often musicians do not know how their instruments were built and how the materials affect the sound. Wood scientists, on the other hand, typically focus on larger applications (such as industrial building) rather than the very fine art of making instruments.

**For more Information and registration: Lorette de Villiers - [lorette@sun.ac.za](mailto:lorette@sun.ac.za) • 0829211945**

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