



# University of Pretoria Yearbook 2024

## Teaching and learning of coding and robotics in the Foundation Phase 300 (JVK 300)

**Qualification** Undergraduate

**Faculty** [Faculty of Education](#)

**Module credits** 12.00

**NQF Level** 07

**Programmes** [BEd \(Foundation Phase Teaching\)](#)

**Prerequisites** JST 320 (Natural Science and Technology in FP) and students must have completed and passed all mathematics and literacy practice modules in their 1st and 2nd years (including JGS 121, 211 and JGS 212, JGL 113, 213, 313, or JGL 110, 200, 311).

**Contact time** 2 lectures per week, 2 practicals per week

**Language of tuition** Module is presented in English

**Department** Early Childhood Education

**Period of presentation** Semester 2

### Module content

- Demystifying coding and robotics for early childhood education pre-service teachers through an integrative approach, whereby teaching and learning is integrated to support pre-service teachers in their immediate contexts and provide them with the necessary background knowledge, skills and values related to Coding and Robotics in order to teach and transfer their knowledge to learners in the classroom.
- The teaching and learning approach is based on allowing accessibility to all students, through a transdisciplinary approach, whilst developing 21st century skills
- Introduce the history of Coding and Robotics in early childhood education and establish the place of Coding and Robotics in the curriculum, whilst highlighting the importance of the module, especially in early childhood education.
- Apply knowledge, skills and values of Coding and Robotics in early childhood education through a play-based, activity-based approach, whilst accentuating the relevance and importance of perceptual development
- Activate critical and creative thinking through collaborative thinking and reasoning, and highlight the importance of dynamic problem solving.

### General Academic Regulations and Student Rules

The [General Academic Regulations \(G Regulations\)](#) and [General Student Rules](#) apply to all faculties and registered students of the University, as well as all prospective students who have accepted an offer of a place at the University of Pretoria. On registering for a programme, the student bears the responsibility of ensuring that



they familiarise themselves with the General Academic Regulations applicable to their registration, as well as the relevant faculty-specific and programme-specific regulations and information as stipulated in the relevant yearbook. Ignorance concerning these regulations will not be accepted as an excuse for any transgression, or basis for an exception to any of the aforementioned regulations. The G Regulations are updated annually and may be amended after the publication of this information.

#### **Regulations, degree requirements and information**

The faculty regulations, information on and requirements for the degrees published here are subject to change and may be amended after the publication of this information.

#### **University of Pretoria Programme Qualification Mix (PQM) verification project**

The higher education sector has undergone an extensive alignment to the Higher Education Qualification Sub-Framework (HEQSF) across all institutions in South Africa. In order to comply with the HEQSF, all institutions are legally required to participate in a national initiative led by regulatory bodies such as the Department of Higher Education and Training (DHET), the Council on Higher Education (CHE), and the South African Qualifications Authority (SAQA). The University of Pretoria is presently engaged in an ongoing effort to align its qualifications and programmes with the HEQSF criteria. Current and prospective students should take note that changes to UP qualification and programme names, may occur as a result of the HEQSF initiative. Students are advised to contact their faculties if they have any questions.