

**ECE 203: Mathematics in Early Childhood Education**  
**Department of Educational Foundations, Faculty of Education, University of Jos**  
**Course Outline**

**Course Code:** ECE 203

**Course Name:** Mathematics in Early Childhood Education

**Credit Load:** 3 Credits

**Lecturer Name:** Dr. Katrina Korb

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**Academic Session:** First Semester 2019/2020

**Website:** [www.KorbEdPsych.com](http://www.KorbEdPsych.com)

**Course Description**

Logico-mathematical and spatio-temporal learning by the child's own experience with objects (learning by discovery), creating and inventing relationships between objects and symbols and resulting integration and reorganization of ideas by the child. Spatial relations, time concepts, number concepts, one-to-one correspondence, comparing sizes, comparing amounts, comparing and evaluating different points of view, classification, seriation, conservation. Teaching aids for nursery mathematics. Learning activities for nursery mathematics. Assessing mathematics in nursery education. Shapes, sets and sorting patterns, money, time, weight, length.

**Course Objectives**

By the end of this course, students will be able to:

- Describe how young children learn mathematics.
- Explain effective approaches for teaching mathematics in the early years.
- Describe developmentally appropriate mathematics concepts for the early years.
- Plan an effective mathematics lesson for young children.

**Course Outline**

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| 1. Introduction to mathematics learning in the early years          | 8. Measurement                                   |
| 2. How children learn mathematics                                   | 9. Algebra and patterns                          |
| 3. Effective approaches for teaching mathematics in the early years | 10. Data analysis                                |
| 4. Number sense and counting  | 11. Planning an effective mathematics lesson     |
| 5. Comparing and ordering numbers                                   | 12. Assessment of mathematics in the early years |
| 6. Operations with numbers  | 13. Conclusion                                   |
| 7. Shapes   |  |

**Continuous Assessments**

**Option 1**

- CA Test (40 points)

**Option 2**

- Mathematics Journal (15 points)
- Lesson Plan (10 points)
- Practicum (15 points)

**Course Readings**

Korb, K. A. (2018). *Celebrating young children: Mathematics learning in the early years*. Jos, Kaduna: Prudent Universal Press.

National Association for the Education of Young Children, & National Council of Teachers of Mathematics. (2010). *Early childhood mathematics: Promoting good beginnings* [Position Statement]. Retrieved from <https://www.naeyc.org/sites/default/files/globally-shared/downloads/PDFs/resources/position-statements/psmath.pdf>

Other readings may be posted on the course website.