



## Reflection and Knowledge through Integrated Practices in Course of Initial Teacher Training in Mathematics and Physics

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### Abstract

From the perspective of teacher education and the creation and promotion of the Federal Institutes degrees, this work shows activities and practices and/or methodologies developed in Basic Mathematics discipline of the first semester of the bachelor's degree in mathematics and Physics of Federal Institute Farroupilha -campus São Borja. During the course, students have contact with the integrated teaching practices and integration projects, among these activities, is included participation in educational research, extension programs, preparation of teaching materials, project development of the scientific events and many other. Thus, the main objective of the Basic Mathematics discipline is to develop in each basic math content a differentiated didactic materials, enabling future teachers to direct future actions that will contribute to their formation and consequently the learning of their students. Thus, this work is done with the intention that students in process of formation can understand and realize the importance of the relationship between mathematical and physical knowledge and pedagogical knowledge, considering the complexity of teaching practice, so that they may have awareness the most appropriate actions and promote awareness for a job well articulated based on interdisciplinary practices. Accordingly, the Basic Mathematics discipline has developed each basic math content a differentiated didactic materials, enabling future teachers to direct future actions that will contribute to their training and consequently the learning of their students. In this way, it becomes essential to identify and understand practices integrated project proposals in the course of Mathematics degree from the Federal Institute Farroupilha-campus São Borja and propose different activities. The initial contact with suggestions and construction of alternative materials provides a broader and more concrete prospects of educational and learning, enabling to relate the theoretical and practical knowledge. It is understood that promote similarities between theory and practice in an integrative perspective, dissemination and sharing of knowledge is an important strategy that can contribute to social change and practice of future teachers who will work in our schools. About building materials, it is believed to be a 'door' that opens and which promotes a 'link' between the shared and produced knowledge and and the expected results in education.