

# **A Curriculum Design on Open Source Software for C Programming**

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## ***Abstract***

*The C language is the most popular computer programming language introduced in most Chinese university. A lot of undergraduates are absorbed to devote themselves to this domain in years. Generally speaking, most undergraduates are deficient in the background knowledge about the C's essence. In order to achieve the essential knowledge, we have a curriculum on the C language lecture for the students in their fourth term. After surveying the same curriculum of many colleges we found that most of them were focusing on the basis and syntax of C language, few on programming skills training. The students, actually, didn't interest in learning the simply syntax or basic statement in that they lost impulsion to master this beautiful computer programming language in our empirical results. As reforming the curriculum year by year, we have attempted to include vital open source software to show the programming essence of C language to students and instruct them to think about the language, learn the skills of development method and research issues. It is the hardest challenge for most students because they are used to the IDE in Windows operating system and lack of software engineers with experience in open source methodologies. Unfortunately open source software' toolkits provide unique opportunities for less experienced software engineers to gain experience solving real-world problems. So some effective methods or mode should be used in curriculum by lecturer. This paper mainly discuss about how to impart the C language programming to the students on open source software. According to a survey of students went through this curriculum in recent years, it shows the teaching effect is quite good for most students to master the C language programming.*

*Keywords : open source software, C programming lecture, computation, GNU*