As engineers today often work in intercultural projects and contexts, intercultural competences must be part of the learning objectives in engineering educations. Cultural aspects of engineering education should not just be treated as a question of appropriate communication and teaching: cultural aspects are basically part of engineering disciplines, work challenges as well as the contextual elements in engineering curriculum [1,2]. This is reflected in the aims of the CDIO programme [3,4]; however, the programme, as well as the teaching practices, undoubtedly needs to further develop approaches to cultural aspects in engineering education. Hence the key-question of this paper is how CDIO support the development of intercultural competences in engineering education. The paper explores the implementation of CDIO in an intercultural arctic engineering programme in Greenland that since 2001 has been enrolling students with special focus on developing intercultural competences. The discussion draws on the socio-technical approaches to technology and professional engineering practices [5,6]. We conclude that intercultural teaching is not just a matter of teaching in spite of cultural differences; it involves the ability to communicate across differences and foster mutual learning processes and approaches to problem solving. We also point to methods and lessons learned to address this challenge in practice. The discussions and findings of the paper have relevance in several ways. Firstly, it addresses the continuously development of CDIO, including the current discussion of a new principles [7]. Secondly it has practical relevance to the engineering education, which to a growing degree has to cope with the potentials and challenges of internationalisation of educations and thus intercultural classrooms. Thirdly it has a more general relevance for educational development as engineers most often are working in projects within different cultural settings and contexts and in culturally diverse groups.