

## **TRANSITION FROM SECONDARY TO TERTIARY EDUCATION**

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### **Short description of the Discussion Group: aims and underlying ideas**

*The modern world thrives on quantitative information. Consequently, many university majors are becoming increasingly mathematical. Thus it is problematic that many secondary school graduates are not ready for tertiary course work in mathematics and statistics. For example, 35.1% of U.S. college mathematics enrollments are in pre-college remedial courses: 1.4 million out of 3.9 million in fall 2010 (Blair, Kirkman, & Maxwell, 2012). Such deficiency in mathematical knowledge and skills can influence students' decisions to abandon their intended major and transfer to a less mathematically demanding major, or even to quit tertiary education. This discussion group will examine the difficulties that students encounter in making the mathematical transition from secondary to tertiary education. The group will investigate the methods used to assess student readiness in mathematics and programs to help beginning tertiary students when they face mathematical struggles. The discussion will consider both students who seek mathematically intensive majors at the tertiary level and those who pursue less mathematically intensive degrees.*

### **Planned structure**

The organisers and invited presenters (co-chairs and team members) will provide introductions on the theme of the *Transition from Secondary to Tertiary Education* to provide a framework for the discussions and will spend most of the sessions facilitating the discussion among the participants. The sessions will be structured (a) to provide contexts for discussion, (b) to simulate discussion, and (c) to get the participants involved and draw out their ideas. The team has already identified and invited several potential participants. Everyone is welcome!

Tuesday Timeline	Topic	Format and Presenter
16.30–16.50	<i>Issues in the Transition from Secondary to Tertiary Mathematics Education: North American Perspectives</i>	16-min presentation by Foley and Tanner + 4 min of questions and answers
16.50–17.05	<i>Are University Freshmen Mathematically Ready?</i>	12-min presentation by Er + 3 min of questions and answers
17.05–17.20	<i>Issues in the Transition from Secondary to Tertiary Mathematics Education</i>	Small-Group Discussion facilitated by team members
17.20–18.00	<i>Issues in the Transition from Secondary to Tertiary Mathematics Education</i>	Whole-Group Discussion led by team serving as a panel

Friday Timeline	Topic	Format and Presenter
16.30–16.45	<i>Issues in the Transition from Secondary to Tertiary Mathematics Education: A South American Perspective</i>	12-min presentation by Celis + 3 min of questions and answers
16.45–17.00	<i>How Saudi Arabia Addresses the Challenges of Transitions from Secondary to Tertiary Education</i>	12-min presentation by Khoshaim + 3 min of questions and answers
17.00–17.15	<i>The Role of Universities in the Transition from Secondary to Tertiary Mathematics Education in Jordan</i>	12-min presentation by Alshawa + 3 min of questions and answers
17.15–17.30	<i>Issues in the Transition from Secondary to Tertiary Mathematics Education</i>	Small-Group Discussion facilitated by team members
17.30–18.00	<i>Issues in the Transition from Secondary to Tertiary Mathematics Education</i>	Whole-Group Discussion led by team serving as a panel

## Reference

Blair, R., Kirkman, E. E., & Maxwell, J. W. (2012). *Statistical abstract of undergraduate programs in the mathematical sciences in the United States: Fall 2010 Conference Board of the Mathematical Sciences survey*. Providence, RI: American Mathematical Society.