๑๕

ที่ นศ ๐๐๒๓.๓/ว ๓๔๖๘

ศาลากลางจังหวัดนครศรีธรรมราช
ถนนราชดำเนิน นศ ๘๐๐๐๐

๒๐ กุมภาพันธ์ ๒๕๖๑

เรื่อง ทุนฝึกอบรมของศูนย์ซีมีโอเรคแซม ประจำปี ๒๕๖๑ - ๒๕๖๒ ประเทศมาเลเซีย

เรียน นายอำเภอ และ นายกองค์กรปกครองส่วนท้องถิ่น (ตามบัญชีแนบท้าย)

สิ่งที่ส่งมาด้วย สำเนาหนังสือกรมส่งเสริมการปกครองท้องถิ่น ที่ มท ๐๘๑๖.๓/ว ๔๒๙ ลงวันที่ ๑๓ กุมภาพันธ์ ๒๕๖๑ จำนวน ๑ ชุด

ด้วยกรมส่งเสริมการปกครองท้องถิ่นแจ้งว่า ศูนย์ระดับภูมิภาคว่าด้วยการศึกษาวิทยาศาสตร์และคณิตศาสตร์ของซีมีโอ (ซีมีโอเรคแซม) เมืองปีนัง ประเทศมาเลเซีย จะดำเนินการจัดหลักสูตรฝึกอบรมประจำปี ๒๕๖๑ - ๒๕๖๒ ให้แก่ประเทศไทย จำนวน ๒ รุ่น รวม ๔ หลักสูตร และสำนักงานปลัดกระทรวงศึกษาธิการขอให้กรมส่งเสริมการปกครองท้องถิ่นพิจารณาคัดเลือกผู้สมัครรับทุนฝึกอบรมฯ เสนอให้สำนักงานปลัดกระทรวงศึกษาธิการดำเนินการต่อไป รายละเอียดปรากฏตามสิ่งที่ส่งมาด้วย

จังหวัดนครศรีธรรมราช จึงขอความร่วมมือองค์กรปกครองส่วนท้องถิ่นได้ประชาสัมพันธ์ให้บุคลากรทางการศึกษาในสังกัดทราบ หากมีความประสงค์สมัครขอรับทุนดังกล่าว ให้จัดส่งใบสมัครและสำเนาใบสมัคร รวมจำนวน ๕ ชุด ผ่านองค์กรปกครองส่วนท้องถิ่นต้นสังกัด ไปยังกลุ่มงานส่งเสริมการจัดการศึกษา กองส่งเสริมและพัฒนาการจัดการศึกษาท้องถิ่น กรมส่งเสริมการปกครองท้องถิ่น ทั้งนี้ สำหรับผู้ประสงค์ขอรับทุนในรุ่นที่ ๑ ให้จัดส่งใบสมัครภายในวันที่ ๒๘ กุมภาพันธ์ ๒๕๖๑ และ รุ่นที่ ๒ ให้จัดส่งใบสมัครภายในวันที่ ๓๐ กรกฎาคม ๒๕๖๑ เพื่อพิจารณาดำเนินการคัดเลือกผู้สมัครรับทุนตามจำนวนที่กำหนด สำหรับกำหนดการสอบข้อเขียนและสัมภาษณ์ผู้สมัครรับทุนจะแจ้งให้ทราบในภายหลัง

จึงเรียนมาเพื่อทราบและดำเนินการต่อไป

ขอแสดงความนับถือ

(นายวิญญ์ สิทธิเชนทร์)
ท้องถิ่นจังหวัดนครศรีธรรมราช ปฏิบัติราชการแทน
ผู้ว่าราชการจังหวัดนครศรีธรรมราช

สำนักงานส่งเสริมการปกครองท้องถิ่นจังหวัด
กลุ่มงานส่งเสริมและพัฒนาท้องถิ่น
โทร.๐ ๗๕๓๕ ๖๓๗๕ ต่อ ๑๕,๒๐ โทรสาร. ต่อ ๒๕
www.nakhonlocal.go.th

บัญชีแนบท้าย

หนังสือจังหวัดนครศรีธรรมราช ที่ นศ ๐๐๒๓.๓/ว ๓๔๖๘ ลงวันที่ ๒๐ กุมภาพันธ์ ๒๕๖๑

๑. นายอำเภอเมืองนครศรีธรรมราช
๒. นายอำเภอเฉลิมพระเกียรติ
๓. นายอำเภอทุ่งใหญ่
๔. นายอำเภอร่อนพิบูลย์
๕. นายอำเภอพรหมคีรี
๖. นายอำเภอท่าศาลา
๗. นายกองค์การบริหารส่วนจังหวัดนครศรีธรรมราช
๘. นายกเทศมนตรีนครนครศรีธรรมราช
๙. นายกเทศมนตรีเมืองปากพนัง
๑๐. นายกเทศมนตรีเมืองทุ่งสง
๑๑. นายกเทศมนตรีเมืองปากพูน
๑๒. นายกเทศมนตรีตำบลทางพูน
๑๓. นายกเทศมนตรีตำบลท่าแพ
๑๔. นายกเทศมนตรีตำบลทุ่งสัง
๑๕. นายกเทศมนตรีตำบลหินตก
๑๖. นายกเทศมนตรีตำบลทอนหงส์
๑๗. นายกองค์การบริหารส่วนตำบลกลาย

****

ที่ มท ๐๘๑๖.๓/ว ๔๒๙

กรมส่งเสริมการปกครองท้องถิ่น
ถนนนครราชสีมา กทม. ๑๐๓๐๐

๑๓ กุมภาพันธ์ ๒๕๖๑

เรื่อง ทุนฝึกอบรมของศูนย์ซีมีโอเรคแซม ประจำปี ๒๕๖๑ - ๒๕๖๒ ประเทศมาเลเซีย

เรียน ผู้ว่าราชการจังหวัด ทุกจังหวัด

สิ่งที่ส่งมาด้วย สำเนาหนังสือกระทรวงศึกษาธิการ ด่วน ที่ ศธ ๐๒๐๕/๑๕๓๗
ลงวันที่ ๓๑ มกราคม ๒๕๖๑ จำนวน ๑ ฉบับ

ด้วยกรมส่งเสริมการปกครองท้องถิ่นได้รับแจ้งจากสำนักงานปลัดกระทรวงศึกษาธิการว่า ศูนย์ระดับภูมิภาคว่าด้วยการศึกษาวิทยาศาสตร์และคณิตศาสตร์ของซีมีโอ (ซีมีโอเรคแซม) เมืองปีนัง ประเทศมาเลเซีย จะดำเนินการจัดหลักสูตรฝึกอบรม ประจำปี ๒๕๖๑ - ๒๕๖๒ ให้แก่ประเทศไทย จำนวน ๒ รุ่น รวม ๔ หลักสูตร ดังนี้

๑. รุ่นที่ ๑ จำนวน ๒ หลักสูตร อบรมระหว่างวันที่ ๒ - ๒๗ กรกฎาคม ๒๕๖๑

(๑) หลักสูตร RC-SS-143-1 : Fostering Higher Order Thinking Skills in Secondary Science Education จำนวน ๒ ทุน โดยผู้เข้าอบรมควรเป็นครูวิทยาศาสตร์ระดับมัธยมศึกษาหรือนักการศึกษาด้านวิทยาศาสตร์ซึ่งรับผิดชอบเกี่ยวกับการสอนวิทยาศาสตร์ระดับมัธยมศึกษา

(๒) หลักสูตร RC-PM-143-2 : Enhancing Primary Mathematics Teaching and Learning through Professional Learning Community จำนวน ๒ ทุน โดยผู้เข้าอบรมควรเป็นครูคณิตศาสตร์ระดับประถมศึกษาหรือนักการศึกษาด้านคณิตศาสตร์ซึ่งรับผิดชอบเกี่ยวกับการสอนคณิตศาสตร์ระดับประถมศึกษา

๒. รุ่นที่ ๒ จำนวน ๒ หลักสูตร อบรมระหว่างวันที่ ๑ - ๒๖ เมษายน ๒๕๖๒

(๑) หลักสูตร RC-SS-143-3 : Purposeful Assessment in Secondary Science Classrooms จำนวน ๑ ทุน โดยผู้เข้าอบรมควรเป็นครูวิทยาศาสตร์ระดับมัธยมศึกษาหรือนักการศึกษาด้านวิทยาศาสตร์ซึ่งรับผิดชอบเกี่ยวกับการสอนวิทยาศาสตร์ระดับมัธยมศึกษา

(๒) หลักสูตร RC-PM-143-4 : Enhancing Science, Technology, Engineering and Mathematics (STEM) Learning in Primary Mathematics Classrooms จำนวน ๒ ทุน โดยผู้อบรมควรเป็นครูคณิตศาสตร์ระดับประถมศึกษาหรือนักการศึกษาด้านคณิตศาสตร์ซึ่งรับผิดชอบเกี่ยวกับการสอนคณิตศาสตร์ระดับประถมศึกษา

กรมส่งเสริมการปกครองท้องถิ่นขอแจ้งรายละเอียดเกี่ยวกับทุนฝึกอบรมของศูนย์ซีมีโอเรคแซม ประจำปี ๒๕๖๑ - ๒๕๖๒ ประเทศมาเลเซีย ให้จังหวัดทราบและขอความร่วมมือจังหวัดประชาสัมพันธ์ทุนฝึกอบรมดังกล่าว ให้องค์กรปกครองส่วนท้องถิ่นที่จัดการศึกษาเพื่อแจ้งบุคลากรทางการศึกษาในสังกัดที่ประสงค์สมัครขอรับทุนดังกล่าว ดำเนินการจัดส่งใบสมัครและสำเนาใบสมัครรวมจำนวน ๕ ชุด ผ่านองค์กรปกครองส่วนท้องถิ่นต้นสังกัด มายังกลุ่มงานส่งเสริมการจัดการศึกษา กองส่งเสริมและพัฒนาการจัดการศึกษาท้องถิ่น

/ทั้งนี้ ...

ทั้งนี้ สำหรับผู้ที่ประสงค์สมัครขอรับทุนในรุ่นที่ ๑ ให้จัดส่งใบสมัครภายในวันที่ ๒๘ กุมภาพันธ์ ๒๕๖๑ และ รุ่นที่ ๒ ให้จัดส่งใบสมัครภายในวันที่ ๓๐ กรกฎาคม ๒๕๖๑ เพื่อจะได้ดำเนินการพิจารณาคัดเลือกผู้สมัครรับทุนตามจำนวนที่กำหนด สำหรับกำหนดการสอบข้อเขียนและสัมภาษณ์ผู้สมัครรับทุนจะแจ้งให้ทราบในภายหลัง รายละเอียดปรากฏตามสิ่งที่ส่งมาพร้อมนี้ และสามารถดูรายละเอียดเพิ่มเติมได้ที่เว็บไซต์ www.dla.go.th

จึงเรียนมาเพื่อโปรดพิจารณาดำเนินการ

ขอแสดงความนับถือ

(นายธนา ยันตรโกวิท)
รองอธิบดี ปฏิบัติราชการแทน
อธิบดีกรมส่งเสริมการปกครองท้องถิ่น

กองส่งเสริมและพัฒนาการจัดการศึกษาท้องถิ่น
กลุ่มงานส่งเสริมการจัดการศึกษาท้องถิ่น
โทร. ๐-๒๒๔๑-๙๐๐๐ ต่อ ๕๓๑๕
โทรสาร ๐-๒๒๔๑-๙๐๒๑-๓ ต่อ ๒๑๘

กรมส่งเสริมการปกครองท้องถิ่น
เลขรับ 5973
วันที่
เวลา

ด่วน

ที่ ศธ ๐๒๐๕/ ๑๕๓๗

สำนักงานปลัดกระทรวงศึกษาธิการ
กทม. ๑๐๓๐๐

กรมส่งเสริมและพัฒนา
เลขรับ 599
วันที่
เวลา

๓๑ มกราคม ๒๕๖๑

เรื่อง ทุนฝึกอบรมของศูนย์ซีมีโอเรคแซม ประจำปี ๒๕๖๑ - ๒๕๖๒ ประเทศมาเลเซีย

เรียน อธิบดีกรมส่งเสริมการปกครองท้องถิ่น

สิ่งที่ส่งมาด้วย สำเนาหนังสือของศูนย์ซีมีโอเรคแซม และเอกสารที่เกี่ยวข้อง จำนวน ๑ ฉบับ

ด้วยศูนย์ระดับภูมิภาคว่าด้วยการศึกษาวิทยาศาสตร์และคณิตศาสตร์ของซีมีโอ (ซีมีโอเรคแซม) เมืองปีนัง ประเทศมาเลเซีย แจ้งว่า จะดำเนินการจัดหลักสูตรฝึกอบรมประจำปี ๒๕๖๑ – ๒๕๖๒ ให้แก่ประเทศไทย จำนวน ๒ รุ่น รวม ๔ หลักสูตร ดังนี้

๑. **รุ่นที่ ๑ จำนวน ๒ หลักสูตร อบรมระหว่างวันที่ ๒ – ๒๗ กรกฎาคม ๒๕๖๑**

๑.๑ หลักสูตร RC-SS-143-1: Fostering Higher Order Thinking Skills in Secondary Science Education จำนวน ๒ ทุน โดยผู้เข้าอบรมควรเป็นครูวิทยาศาสตร์ระดับมัธยมศึกษา หรือนักการศึกษาด้านวิทยาศาสตร์ซึ่งรับผิดชอบเกี่ยวกับการสอนวิทยาศาสตร์ระดับมัธยมศึกษา

๑.๒ หลักสูตร RC-PM-143-2: Enhancing Primary Mathematics Teaching and Learning through Professional Learning Community จำนวน ๒ ทุน โดยผู้เข้าอบรมควรเป็นครูคณิตศาสตร์ระดับประถมศึกษา หรือนักการศึกษาด้านคณิตศาสตร์ซึ่งรับผิดชอบเกี่ยวกับการสอนคณิตศาสตร์ระดับประถมศึกษา

๒. **รุ่นที่ ๒ จำนวน ๒ หลักสูตร อบรมระหว่างวันที่ ๑ – ๒๖ เมษายน ๒๕๖๒**

๒.๑ หลักสูตร RC-SS-143-3: Purposeful Assessment in Secondary Science Classrooms จำนวน ๑ ทุน โดยผู้เข้าอบรมควรเป็นครูวิทยาศาสตร์ระดับมัธยมศึกษา หรือนักการศึกษาด้านวิทยาศาสตร์ซึ่งรับผิดชอบเกี่ยวกับการสอนวิทยาศาสตร์ระดับมัธยมศึกษา

๒.๒ หลักสูตร RC-PM-143-4: Enhancing Science, Technology, Engineering and Mathematics (STEM) Learning in Primary Mathematics Classrooms จำนวน ๒ ทุน โดยผู้เข้าอบรมควรเป็นครูคณิตศาสตร์ระดับประถมศึกษา หรือนักการศึกษาด้านคณิตศาสตร์ซึ่งรับผิดชอบเกี่ยวกับการสอนคณิตศาสตร์ระดับประถมศึกษา

ในการนี้ ศูนย์ซีมีโอเรคแซม ได้ขอความร่วมมือจากกระทรวงศึกษาธิการในการพิจารณาเสนอชื่อผู้สมัครรับทุนดังกล่าว ภายในวันที่ ๓๐ มีนาคม ๒๕๖๑ (รุ่นที่ ๑) และ ๑๗ ธันวาคม ๒๕๖๑ (รุ่นที่ ๒) ซึ่งผู้สมัครควรมีอายุไม่เกิน ๕๐ ปี รวมทั้งมีคุณสมบัติตามที่กำหนดข้างต้น ตลอดจนมีความรู้ความสามารถด้านทักษะการใช้ภาษาอังกฤษเป็นอย่างดี มีสุขภาพแข็งแรง และไม่ได้อยู่ในระหว่างการตั้งครรภ์ ทั้งนี้ ศูนย์ซีมีโอเรคแซมจะรับผิดชอบค่าบัตรโดยสารเดินทางระหว่างประเทศ (ไป-กลับชั้นประหยัด) ค่าที่พักและค่าอาหารให้กับผู้ที่ได้รับการคัดเลือกให้รับทุนดังกล่าว ตามรายละเอียดที่แนบ

กลุ่มงานส่งเสริมการจัดการศึกษาท้องถิ่น
เลขรับ 251
วันที่ - 2 ก.พ. 2561
เวลา

/สำนักงาน...

สำนักงานปลัดกระทรวงศึกษาธิการ ขอความร่วมมือจากหน่วยงานของท่านในการพิจารณาเสนอชื่อผู้มีคุณสมบัติเหมาะสม พร้อมทั้งส่งใบสมัครและสำเนารวม ๕ ชุด สำหรับรุ่นที่ ๑ หลักสูตรละ ๒ คน มายังสำนักความสัมพันธ์ต่างประเทศ สป. ภายในวันที่ ๑๔ มีนาคม ๒๕๖๑ และรุ่นที่ ๒ หลักสูตรละ ๒ คน ภายในวันที่ ๑๖ สิงหาคม ๒๕๖๑ สำหรับกำหนดการสอบข้อเขียนและสัมภาษณ์ผู้สมัครรับทุน จะแจ้งให้ทราบในภายหลัง

จึงเรียนมาเพื่อโปรดพิจารณาให้ความร่วมมือในเรื่องข้างต้นด้วย จักขอบคุณยิ่ง

ขอแสดงความนับถือ

(นางวัฒนาพร ระงับทุกข์)
รองปลัดกระทรวง ปฏิบัติราชการแทน
ปลัดกระทรวงศึกษาธิการ

สำนักความสัมพันธ์ต่างประเทศ
โทร. ๐ ๒๒๘๑ ๖๓๗๐ ต่อ ๑๐๘
โทรสาร ๐ ๒๒๘๑ ๐๙๕๓

รายละเอียดเกี่ยวกับผู้สมัครรับทุนซีมีโอเรคแซม

ชื่อหลักสูตร _____

_____

1. ชื่อและนามสกุล _____

   Name-Surname_____

   วุฒิ _____

2. วิชาเอก _____ วิชาโท _____

3. วันเดือนปีเกิด _____ อายุ _____ ปี อายุราชการ _____ ปี

4. ตำแหน่งและที่ทำงานปัจจุบันพร้อมหมายเลขโทรศัพท์ (เขียนให้ละเอียดและชัดเจน)

   _____

   _____

   _____

   ที่อยู่โรงเรียน _____

   โทรศัพท์ _____โทรสาร _____ E-mail _____

   ที่อยู่ปัจจุบัน _____

   โทรศัพท์ _____ E-mail _____

5. ความรู้ภาษาอังกฤษ ☐ ดี ☐ ปานกลาง ☐ พอใช้

6. ความรู้ภาษาอื่น ๆ ☐ จีน ☐ ญี่ปุ่น ☐ อื่น ๆ โปรดระบุ _____

7. ความรู้ด้านคอมพิวเตอร์ ☐ ดี ☐ ปานกลาง ☐ พอใช้

8. ประสบการณ์และพื้นความรู้ทางด้านภาษาที่เกี่ยวข้องกับหลักสูตรการอบรมที่เสนอขอรับทุน

   8.1 _____

   8.2 _____

   8.3 _____

   8.4 _____

   8.5 _____

   8.6 _____

9. เคยเดินทางไปศึกษา/ฝึกอบรม/ ดูงาน/ประชุม/สัมมนาต่างประเทศหรือไม่

   ☐ เคย ☐ ไม่เคย

   (ถ้าเคยให้แจ้งด้วยว่า เคยไปศึกษา/ฝึกอบรม/ ดูงาน/ประชุม/สัมมนาในเรื่องใด ที่ไหน และเมื่อไร)

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10. หน้าที่การงานปัจจุบัน

10.1 การสอนหรือการนิเทศ _____

10.2 งานพิเศษ _____

10.3 งานอื่น ๆ _____

11. เหตุผลที่ประสงค์จะไปอบรมที่ศูนย์ซีมีโอเรคแซม _____

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12. งานที่จะทำเมื่อกลับจากการอบรมแล้ว (หากได้รับทุน)

_____

_____

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_____

13. ข้าพเจ้าขอรับรองว่า ข้อความดังกล่าวข้างต้นถูกต้อง และเป็นความจริง

ผู้สมัครลงนาม _____

ผู้บังคับบัญชา _____

ตำแหน่ง _____

สำนักความสัมพันธ์ต่างประเทศ
เลขที่ 205
วันที่ 23 มค. 2561
เวลา 9.52
สำนักงานปลัดกระทรวงศึกษาธิการ

Southeast Asian Ministers of Education Organisation
Regional Centre for Education in Science and Mathematics

Our Ref: RCP/GEN/157/V.25(12)
Date: 5 January 2018

Karoon Sakulpradit
Permanent Secretary
Ministry of Education
Rajdamnern Nok Avenue
Dusit, Bangkok 10300
THAILAND

Dear Sir/Madam,

REGULAR COURSES (BATCH 1) OFFERED BY SEAMEO RECSAM FOR FISCAL YEAR 2018/2019 (2 – 27 JULY 2018)

We are honoured to inform you that SEAMEO RECSAM will be offering courses for senior educators and teacher trainers to SEAMEO member countries. Attached herewith are the information and condition that will assist the various Ministries of Education in their selection of nominees to attend SEAMEO RECSAM Regular Courses.

2.0 NOMINATION OF PARTICIPANTS

2.1 Please send the list of Nominees, Participants' Application Forms and Scholarship Agreements for the courses as stipulated in the following table. It is much appreciated if the Ministries of Education could cooperate to meet with the deadlines suggested (**30 March 2018**). The participants may be nominated to the courses according to the allocations as stated below:

Course Code	Course Title	No. of Scholarships Offered Per Country
RC-SS-143-1	Fostering Higher Order Thinking Skills in Secondary Science Education	2
RC-PM-143-2	Enhancing Primary Mathematics Teaching and Learning through Professional Learning Community	2

Member Countries are welcome to send fee-paying participants for the above courses (see item 5.0 for conditions). Applications for places could be made earlier through telephone call or e-mail at director@recsam.edu.my followed by an official letter to Director, SEAMEO RECSAM, Jalan Sultan Azlan Shah, 11700 Gelugor, Penang, Malaysia.

กสมภูมิภาค
รมญาณร

SEAMEO RECSAM, Jalan Sultan Azlan Shah, 11700 Gelugor, Penang, MALAYSIA
Tel: 60 4-6522700 Fax: 60 4-6522737 E-mail: director@recsam.edu.my

2.2 The qualifications required for the course participants are described in the annexures of the different courses. **Please follow the required qualifications as strictly as possible in your selection** of participants for the respective courses. This is to ensure active participation during the course and to allow participants to derive full benefit from the courses. In addition, to enhance the impact of these courses it is suggested that the nominated participants are key personnel who are/will be likely to implement multiplier effects upon their return to their respective positions.

2.3 The nominated participants must be in good health both physically, mentally and certified medically fit in order to complete the course (Applicants must submit his/her **medical certificate** together with the application form).

2.4 Nominations would normally be considered only upon receipt of the duly completed application forms of the nominees. Please notify RECSAM soonest possible if your country is unable to fill the number of the scholarships specified. The vacant places may be offered to other member countries with due notice.

2.5 Applicants should also submit a photocopy of the front page of their passports with their particulars clearly printed. Applicants who do not have a passport at the time of application will need to submit the documents **two weeks** after notification of acceptance.

2.6 **Attention**. Completed application form, scholar agreement, medical report, photocopy of international passport and other relevant documents of the nominated candidates must send to SEAMEO RECSAM before the deadline given. If this is not possible, then a list of the names of potential candidates with the certified copy of their qualifications in Science/Mathematics must be sent in advance to SEAMEO RECSAM. All member countries are expected to NOMINATE AT LEAST THREE NAMES as candidates for each course. Out of these names, SEAMEO RECSAM will select two nominees for each of the courses RC-PS-142-1, RC-PM-142-2, RC-SM-142-4 and one nominee for course RC-SS-142-3. If any of the candidate's qualification does not meet the requirements stated, SEAMEO RECSAM has the right to reject that particular candidate and the scholarship will be given to candidates from other member countries.

3.0 COURSE INFORMATION

3.1 Details of the Courses

Please refer to attached booklet on course descriptions.

3.2 Compulsory Requirement

All participants must have a good working knowledge of spoken and written English in order **to get the** maximum benefit out of the courses. **A certified copy of their proficiency in English must be attached with the participants' form.**

4.0 GENERAL INFORMATION

4.1 Personal Accident Insurance

Participants should secure their own personal insurance themselves throughout the duration of the course. SEAMEO RECSAM will not be responsible for taking insurance to cover personal insurance accidents. **No responsibility for any form of insurance or any other expenses such as passport fee, visa fee, exit fee, insurance premium, etc. will be assumed by SEAMEO RECSAM, SEAMEO Secretariat or the Government of Malaysia.**

4.2 *Health and Age Limit*

The nominated participant must be in excellent health and should **not be more than 50 years of age.**

4.3 *Expectant Mothers*

Because of the intensive nature of the training programme, it may not be advisable for female participants who are pregnant to attend these courses. Moreover, most airlines generally do not accept passengers who are in an advanced stage of pregnancy, normally around 7 months and above. As such, nominating Ministries should ensure that participants will not face this problem particularly on their homeward journey. SEAMEO RECSAM reserves the right to terminate the training programme of any participant who is likely to face such a problem. However, the termination procedure will, as usual, be made in consultation with the nominating Ministry.

4.4 *Terms of Scholarships*

Participants from SEAMEO countries on SEAMEO Scholarships will be provided with:

i) Economy class air-ticket **from capital city** International Airport of participant's work station to Penang and back. As soon as nominations are received and accepted by SEAMEO RECSAM Office, airline tickets will be dispatched to the respective Ministries of Education unless otherwise requested by the Ministries of Education to be sent to the nearest city where the participants live. If, for any reasons whatsoever, the Centre wishes to alter these terms and conditions in any way, we reserve the right to do so entirely at our discretion. Any alterations, amendments or additions to these terms and condition of service shall be advised to you in writing.

ii) Food and accommodation on twin-sharing basis are provided at SEAMEO RECSAM International House for the duration of the course.

Attention: Any fee incurred by a participant due to last minute cancellation of ticket or replacement of participant, after the ticket is issued, should be borne by the Ministry of Education of that nominating country. SEAMEO RECSAM will not take on the responsibility for such penalty charge or extra charge of any kind pertaining to the above.

4.5 Each participant is requested to complete and sign 2 copies of the "SEAMEO RECSAM Scholar Agreement" Forms. Kindly reproduce more copies of the agreement if necessary. One completed copy is to be returned and one copy to be kept by the Ministries of Education for reference.

4.6 *Accommodation, Food and Attire*

Participants will be accommodated at SEAMEO RECSAM International House and food will be provided at RECSAM Cafeteria. On occasions when meals are not catered for, food allowance will be given. The rooms are of double occupancy with bathroom attached. SEAMEO RECSAM has the right to allocate room-mates to the participants. All participants are expected to be **formally dressed for classes** – no T shirts and jeans during class sessions. Participants should also wear **proper attire while travelling to Malaysia and back.**

4.7 *Early Issue of Exit Permits and Entry Visas to Malaysia*

No visa is required for a stay of less than one month for nationals of all ASEAN countries except Myanmar. For a stay exceeding one month, a visa will be required, except for nationals of Brunei and Singapore. It is requested that the following be done as early as possible:

i. **Exit permit** for nominated participants must be obtained from their own Government, and

ii. **Entry visa** for nominated participants into Malaysia must be obtained from the Malaysian Embassy in the participants' own country. RECSAM will send the participants a letter of offer to help expedite the visa application process when we receive the participants' names from the Ministries of Education.

4.8 *National Costume for Closing Ceremony*

It is requested that each participant from the various member countries bring along with him/her the **country's national costume to be worn during the Closing Ceremony**.

4.9 *Cultural Performance*

It is a normal practice in SEAMEO RECSAM that at the end of every batch of courses, there will be a cultural performance held after the closing ceremony and certificate presentation. Participants from different SEAMEO countries are expected to give a cultural presentation (eg. Dance, drama, and the like) that depicts the culture of their countries. It would certainly be very helpful if they could come prepared with the necessary items such as costumes, musical instruments, etc. related to their culture.

4.10 *Gifts Exchange*

Before the participants leave for their home countries, there will usually be the exchanging of souvenirs and gifts among participants. It is advisable that the participants bring along souvenirs for this purpose.

5.0 PARTICIPANTS FROM MEMBER COUNTRIES ON FEE-PAYING BASIS

The following are the conditions for participants from Member Countries on fee-paying basis:

i. They will also abide by the stipulations of the RECSAM Scholar Agreement and follow the requirements of the programme;
ii. They are physically fit and meet the necessary qualifications to attend the course;
iii. They pay a minimum course fee which does not cover airfare, medical expenses, insurance, and extension of visa fees. (For further enquiries, kindly write to Director, SEAMEO RECSAM, Jalan Sultan Azlan Shah, 11700 Gelugor, Penang, Malaysia, or email director@recsam.edu.my or Fax: +604-6522737).

Thank you.

Yours sincerely,

KHOR SIM SUAN
Deputy Director, Training Programme
for Centre Director

Copies to:
Chairman & Members of RECSAM Governing Board
SEAMEO Affairs Officers, Ministries of Education, SEAMEO Member Countries
Director, SEAMEO Secretariat, Bangkok 10110, Thailand

* Enclosed please find the following documents for your kind perusal and action:

i. Course Description for Fiscal Year 2017/2018
ii. Application Form
iii. Medical Report Form
iv. Scholar Agreement
v. Checklist for the documents to be submitted to SEAMEO RECSAM by each participants

REGULAR COURSES

FOR FISCAL YEAR 2018/2019 (BATCH 1)

2 – 27 JULY 2018

COURSE DESCRIPTION

REGULAR COURSES FOR FISCAL YEAR 2018/2019

2 – 27 July 2018

COURSE CODE	COURSE TITLE	NO. OF SCHOLARSHIPS OFFERED PER COUNTRY
RC-SS-143-1	FOSTERING HIGHER ORDER THINKING SKILLS IN SECONDARY SCIENCE EDUCATION	2
RC-PM-143-2	ENHANCING PRIMARY MATHEMATICS TEACHING AND LEARNING THROUGH PROFESSIONAL LEARNING COMMUNITY	2

Level
P: Primary
S: Secondary

Subject
S: Science
M: Mathematics

SOUTHEAST ASIAN MINISTERS OF EDUCATION ORGANISATION
REGIONAL CENTRE FOR EDUCATION IN SCIENCE AND MATHEMATICS
Jalan Sultan Azlan Shah, 11700 Gelugor, Penang, Malaysia
Telephone: 604-6522700
Fax: 604-6522737
Website: http://www.recsam.edu.my/

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Appendix 2: Medical Report Form	
Appendix 3: Scholar Agreement	
Appendix 4: Checklist Form	

IMPORTANT DATES

DATE	ACTION
30 March 2018	Deadline to receive nominations from Ministries of Education
2 – 20 April 2018	Selection of participants by SEAMEO RECSAM
23 April – 4 May 2018	Notification of acceptance to successful applicants (via email) **Please ensure email ID provided in participation form are valid.*
7 – 18 May 2018	Deadline to receive confirmation of participation form
11 – 22 June 2018	Distribution of e-tickets to the participants
2 July 2018	Course commences
27 July 2018	Course ends

REGULAR COURSES FOR FISCAL YEAR 2018/2019

Course Code: RC-SS-143-1

Course Title: FOSTERING HIGHER ORDER THINKING SKILLS IN SECONDARY SCIENCE EDUCATION

Rationale:

Recently there have been widespread discussions on the need for the teaching of higher order thinking skills (HOTS) to prepare students to be the creative and innovative workforce. No longer is it enough for high school graduates simply to know basic facts and skills. To be successful, students must master decision-making, prioritising, strategising and collaborative problem solving. Moreover, higher order thinking allows students to excel and achieve intellectual freedom (Limbach & Waugh, 2010).

Although we often assume that thinking skills develop automatically as students go through their schooling years, higher order thinking, specifically, needed to be taught, either implicitly or explicitly. In order to help students develop HOTS, teachers need to purposely and persistently practice strategies that promote higher order thinking such as bringing real-world problems into the classrooms, encouraging open-ended class discussions, and to carry out inquiry-oriented experiments (Miri, David, & Uri, 2007)

This course will introduce the participants to the what, why and how of higher order thinking as well as useful teaching and learning approaches, strategies and thinking tools that foster HOTS among the students.

Objectives:

The main objective of this course is to provide participants with the knowledge and skills required to foster higher order thinking among their students. At the end of the course, participants should be able to:

1. understand the definition and learning theories related to HOTS;
2. acquire the necessary skills to develop HOTS through contemporary teaching and learning approaches such as Inquiry-based Science Education (IBSE) and Socio-Scientific Issues-based Education;
3. utilise questioning techniques and metacognition to promote higher order thinking in science classrooms;
4. incorporate ICT and thinking tools to cultivate creative, critical and inquiry thinking skills; and
5. develop higher order thinking assessment tools.

Course Contents:

This course is activity-oriented and participants will engage actively in initiating activities that facilitate discussions, sharing of experiences, planning and developing science lessons incorporating HOTS.

The major areas include:

1 Science Education
- 1.1 Trends and Issues in Secondary Science Education
- 1.2 Science Process Skills as Fundamentals to HOTS
- 1.3 Definition and Learning Theories related to HOTS

2 Teaching and Learning Approaches to Foster Higher Order Thinking
   2.1 IBSE
   2.2 Socio-scientific Issues-based Education
   2.3 Outdoor Science Learning
3 Strategies to Foster Higher Order Thinking
   3.1 Questioning Techniques for Higher Order Thinking
   3.2 Metacognition
   3.3 Integration of ICT
   3.4 Classroom Discourse, e.g. Reasoning, Argumentation, Debate
   3.5 Thinking Tools, e.g. Thinking Maps, Concept Cartoons, Graphic Organisers
4 Assessing Higher Order Thinking
   4.1 Assessing Higher Order Thinking in the Classroom
   4.2 International Assessments: Analysis of TIMSS and PISA Items
   4.3 Higher Order Thinking Items Construction
5 Theory into Practice
   5.1 Planning, Designing, Implementing and Improving Lessons Plans and Strategies with Emphasis on Developing HOTS Using the Lesson Quality Improvement Processes.

Duration: Four Weeks

Participants: Science Educators or Key Secondary Science Teachers

English Proficiency: Minimum IELTS Band of 4.5 or Equivalent

Expected Output:
1. Group Project Work Report
2. Individual Multiplier Effect Action Plan

References:

Limbach, B. & Waugh, W. (2010). Developing Higher Level Thinking. *Journal of Instructional Pedagogies Journal (3).* Academic & Business Research Institute.

Miri, B., David, B-C. & Uri, Z. (2007). Purposely Teaching for the Promotion of Higher-order Thinking Skills: A Case of Critical Thinking. *Research in Science Education: 37(4)*: pp 353-369. Retrieved from http://link.springer.com/article/10.1007/s11165-006-9029-2

Course Code: RC-PM-143-2

Course Title: ENHANCING PRIMARY MATHEMATICS TEACHING AND LEARNING THROUGH PROFESSIONAL LEARNING COMMUNITY

Rationale:

Teachers are continuing seeking ways, albeit systematically, to improve classroom teaching and learning. To facilitate learning, teachers prepare lessons, develop instructional materials, evaluate student work, and share outcome with students with the intention of improving learning. This may sound like daily classroom teaching routines. But, if those activities are seen in a different perspective, that describes teachers designing and implementing a plan of action, observing and analysing outcomes, and modifying plans to better meet the needs of students, then the description is robust enough to be seen as a classroom research (Anderson, 2004). These activities will yield the ultimate goal of improving the quality of teaching and enhance better learning. As such, it is certainly appropriate to regard teachers as researchers. In fact, meaningful teacher research should be an intentional and systematic inquiry in order to improve classroom practice, and accordingly the outcome should also be a formal way of recording a good teaching in a written format.

However, it is equally important that all academic staff of a school work on the school's common purpose. Otherwise the various staff may be moving in different directions that could result in a lack of alignment of the scope and reducing the effect of collegial cohesion. Hence, all teachers at the school should come together to meet as one community, to share what the individual teachers or smaller units are learning, and to carry out the specific research learning that the whole school group deems important. This is the basic purpose of establishing Professional Learning Community (PLC) to upgrade the quality of teaching and thereby enhancing students' successful learning (Hord, Roussin & Sommers, 2010). Quality teaching is strengthened by continuing professional development of the teachers, and PLC sets the environment that facilitates collegiality and close collaboration among them.

To promote the notion of teachers as researchers, and to increase the effectiveness of PLC, three classroom-based research methodologies, i.e. action research, case study and lesson study are recommended to be used by teachers to research on their own teaching. In the process of implementing any one or all of those methodologies, the teacher would have to choose a research question that he wants to focus on as provided by the whole school group, and then plan how to gather data for deriving useful information. Through data analysis, the teacher will then be able to reflect on what he has learned, and make conclusions or decisions on how to improve instructional practices to better serve student needs.

Objectives:

The main objectives of this course is to provide participants with the knowledge and skills required to conduct classroom-based research with the intention of establishing PLC in their own schools to enhance primary mathematics teaching and learning.

At the end of the course, participants should be able to:

1. acquire basic knowledge and philosophy of classroom-based research, such as action research, case study and lesson study;
2. develop basic research skills necessary to conduct classroom-based research in education to improve teaching and learning of primary mathematics;
3. attain simple statistical techniques for data analysis;

4 adopt alternative teaching methods/strategies derived from classroom-based research for enhancing effective teaching and learning of primary mathematics;
5 plan, design, implement, analyse and make conclusion collaboratively on a primary classroom-based research study; and
6 establish PLC in their own schools.

Course Contents:

This course emphasises a good grounding of theory in educational research and reflective classroom practices. Participants will have to engage actively in course activities and discussions, as well as fostering team work in designing and carrying out a small-scale classroom-based research study. The knowledge and skills acquired would enable them to initiate classroom-based research and form PLC for improving primary mathematics classroom practices in their respective schools upon returning to their own countries.

The major areas include:

1 Introduction to Educational Research
- 1.1 Teachers as Researchers
- 1.2 Nature and Elements of Educational Research
- 1.3 Types of Research: Qualitative, Quantitative and Mixed-mode Research

2 Mathematics Education
- 2.1 Issues and Trends in Primary Mathematics Education
- 2.2 Selected Strategies/Approaches in Teaching and Learning of Primary Mathematics
- 2.3 Formative Assessment

3 Classroom-based Research Methodologies
- 3.1 Action Research
- 3.2 Case Study
- 3.3 Lesson Study

4 Theory into Practice: Implementation of a Small-scale Classroom-based Research
- 4.1 Research Question
- 4.2 Research Design
- 4.3 Data Collection
- 4.4 Data Analysis
- 4.5 Interpretation, Conclusion and Report Writing

5 Simple Statistical Techniques
- 5.1 Types of Descriptive Statistics
- 5.2 Concepts Underlying Inferential Statistics
- 5.3 Statistical Packages for Data Analysis

6 Professional Learning Community
- 6.1 What, Why and How: Establishing PLC
- 6.2 Sharing Personal Practice for Collective/Whole School Group Learning

Duration: Four Weeks

Participants: Mathematics Educators or Key Primary Mathematics Teachers

English Proficiency: Minimum IELTS Band of 4.5 or Equivalent

Expected Output:
1. Group Project Work Report
2. Individual Multiplier Effect Action Plan

References:

Anderson, A. (2004). An Introduction to Teacher Research. Retrieved on April 18, 2014 from *http://www.learnnc.org/lp/pages/659*

Hord, S.M., Roussin, J.L. and Sommers, W.A. (2010). *Guilding Professional Learning Communities: Inspiration, Challenge, Surprise, and Meaning*. USA: Corwin

CONTACT US

For further information, please contact:

Centre Director
SEAMEO RECSAM
Jalan Sultan Azlan Shah
11700 Gelugor
Penang, Malaysia

Tel: +604 6522 700
Fax: +604 6522 737
Email: director@recsam.edu.my

Officer in-charge:
Ms. Rabiatul Adawiah | Email: rabiatul@recsam.edu.my | Tel: +604 6522 743

สำนักความสัมพันธ์ต่างประเทศ
เลขที่ 206
วันที่ 23 มี.ค. 2561
เวลา 9.52
สำนักงานปลัดกระทรวงศึกษาธิการ

Southeast Asian Ministers of Education Organization
Regional Centre for Education in Science and Mathematics

Our Ref: RCP/GEN/157/V.24(32)
Date: 22 January 2018

Mr. Karoon Sakulpradit
Permanent Secretary
Ministry of Education
Rajdamnern Nok Avenue
Dusit, Bangkok 10300
THAILAND

Dear Sir/Madam,

REGULAR COURSES (BATCH 2) OFFERED BY SEAMEO RECSAM FOR FISCAL YEAR 2018/2019 (1 – 26 APRIL 2019)

We are honoured to inform you that SEAMEO RECSAM will be offering courses for senior educators and teacher trainers to SEAMEO member countries. Attached herewith are the information and condition that will assist the various Ministries of Education in their selection of nominees to attend SEAMEO RECSAM Regular Courses.

2.0 NOMINATION OF PARTICIPANTS

2.1 Please send the list of Nominees, Participants' Application Forms and Scholarship Agreements for the courses as stipulated in the following table. It is much appreciated if the Ministries of Education could cooperate to meet with the deadlines suggested. The participants may be nominated to the courses according to the allocations as stated below:

Course Code	Course Title	No. of Scholarships Offered Per Country
RC-SS-143-3	Purposeful Assessment in Secondary Science Classrooms	1
RC-PM-143-4	Enhancing Science, Technology, Engineering and Mathematics (STEM) Learning in Primary Mathematics Classrooms	2

Member Countries are welcome to send fee-paying participants for the above courses (see item 5.0 for conditions). Applications for places could be made earlier through telephone call or e-mail at director@recsam.edu.my followed by an official letter to Director, SEAMEO RECSAM, Jalan Sultan Azlan Shah, 11700 Gelugor, Penang, Malaysia.

กลุ่มภูมิภาค
รับทราบ

SEAMEO RECSAM, Jalan Sultan Azlan Shah, 11700 Gelugor, Penang, MALAYSIA
Tel: 60 4-6522700 Fax: 60 4-6522737 Email: director@recsam.edu.my

2.2 The qualifications required for the course participants are described in the annexures of the different courses. **Please follow the required qualifications as strictly as possible in your selection** of participants for the respective courses. This is to ensure active participation during the course and to allow participants to derive full benefit from the courses. In addition, to enhance the impact of these courses it is suggested that the nominated participants are key personnel who are/will be likely to effect considerable multiplier effects upon their return to their respective positions.

2.3 The nominated participants must be in good health both physically, mentally and certified medically fit in order to complete the course (Applicants must submit his/her **medical certificate** together with the application form).

2.4 Nominations would normally be considered only upon receipt of the duly completed application forms of the nominees. Please notify RECSAM soonest possible if your country is unable to fill the number of the scholarships specified. The vacant places may be offered to other member countries with due notice.

2.5 Applicants should also submit a photocopy of the front page of their passports with their particulars clearly printed. Applicants who do not have a passport at the time of application will need to submit the documents **two weeks** after notification of acceptance.

2.6 **Attention**. Completed application form, scholar agreement, medical report, photocopy of international passport and other relevant documents of the nominated candidates must send to SEAMEO RECSAM before the deadline given. If this is not possible, then a list of the names of potential candidates with the certified copy of their qualifications in Science/Mathematics must be sent in advance to SEAMEO RECSAM. All member countries are expected to NOMINATE AT LEAST THREE NAMES as candidates for each course. Out of these names, SEAMEO RECSAM will select one nominee for RC-SS-143-3 and two nominees for RC-PM-143-4. If any of the candidate's qualification does not meet the requirements stated, RECSAM has the right to reject that particular candidate and the scholarship be given to candidates from other member countries.

3.0 COURSE INFORMATION

3.1 Details of the Courses

Please refer to attached booklet on course descriptions.

3.2 Compulsory Requirement

All participants must have a good working knowledge of spoken and written English in order to get the maximum benefit out of the courses. **A certified copy of their proficiency in English must be attached with the participants' form.**

4.0 GENERAL INFORMATION

4.1 Personal Accident Insurance

Participants should secure their own personal insurance themselves throughout the duration of the course. RECSAM will not be responsible for taking insurance to cover personal insurance accidents. **No responsibility for any form of insurance or any other expenses such as passport fee, visa fee, exit fee, insurance premium, etc. will be assumed by RECSAM, SEAMEO Secretariat or the Government of Malaysia.**

4.2 *Health and Age Limit*

The nominated participant must be in excellent health and should **not be more than 50 years of age.**

4.3 *Expectant Mothers*

Because of the intensive nature of the training programme, it may not be advisable for female participants who are pregnant to attend these courses. Moreover, most airlines generally do not accept passengers who are in an advanced stage of pregnancy, normally around 7 months and above. As such, nominating Ministries should ensure that participants will not face this problem particularly on their homeward journey. SEAMEO RECSAM reserves the right to terminate the training programme of any participant who likely to face such a problem. However, the termination procedure will, as usual, be made in consultation with the nominating Ministry.

4.4 *Terms of Scholarships*

Participants from SEAMEO countries on SEAMEO Scholarships will be provided with:

i) Economy class air-ticket **from capital city** International Airport from participant's work station to Penang and back. As soon as nominations are received and accepted by SEAMEO RECSAM Office, airline tickets will be dispatched to the respective Ministries of Education unless otherwise requested by the Ministries of Education to be sent to the nearest city where the participants live. If, for any reasons whatsoever, the Centre wishes to alter these terms and conditions in any way, we reserve the right to do so entirely at our discretion. Any alterations, amendments or additions to these terms and condition of service shall be advised to you in writing.

ii) Food and accommodation on twin-sharing basis are provided at SEAMEO RECSAM International House for the duration of the course.

Attention: Any fee incurred by a participant due to last minute cancellation of ticket or replacement of participant, after the ticket is issued, should be borne by the Ministry of Education of that nominating country. SEAMEO RECSAM will not take on the responsibility for such penalty charge or extra charge of any kind pertaining to the above.

4.5 Each participant is requested to complete and sign 2 copies of the "SEAMEO RECSAM Scholar Agreement" Forms. Kindly reproduce more copies of the agreement if necessary. One completed copies are to be returned and one copy to be kept by the Ministries of Education for reference.

4.6 *Accommodation, Food and Attire*

Participants will be accommodated at RECSAM International House and food will be provided at RECSAM Cafeteria. On occasions when meals are not catered for, food allowance will be given. The rooms are of double occupancy with bathroom attached. RECSAM has the right to allocate room-mates to the participants. All participants are expected to be **formally dressed for classes** – no T shirts and jeans during class sessions. Participants should also wear **proper attire while travelling to Malaysia and back.**

4.7 *Early Issue of Exit Permits and Entry Visas to Malaysia*

No visa is required for a stay of less than one month for nationals of all ASEAN countries except Myanmar. For a stay exceeding one month a visa will be required, except for nationals Brunei and Singapore. It is requested that the following be done as early as possible:

i. **Exit permit** for nominated participants must be obtained from their own Government, and

ii. **Entry visa** for nominated participants into Malaysia must be obtained from the Malaysian Embassy in the participants' own country. RECSAM will send the participants a letter of offer to help expedite the visa application process when we receive the participants' names from the Ministries of Education.

4.8 *National Costume for Closing Ceremony*

It is requested that each participant from the various member countries bring along with him/her the country's national costume to be worn during the Closing Ceremony.

4.9 *Cultural Performance*

It is a normal practice in RECSAM that at the end of every batch of courses, there will be a cultural performance held after the closing ceremony and certificate presentation. Participants from different SEAMEO countries are expected to give a cultural presentation (eg. Dance, drama, and the like) that depicts the culture of their countries. It would certainly be very helpful if they could come prepared with the necessary items such as costumes, musical instruments, etc. related to their culture.

4.10 *Gifts Exchange*

Before the participants leave for their home countries, there will usually be the exchanging of souvenirs and gifts among participants. It is advisable that the participants bring along souvenirs for this purpose.

5.0 PARTICIPANTS FROM MEMBER COUNTRIES ON FEE-PAYING BASIS

The following are the conditions for participants from Member Countries on fee-paying basis:

i. They will also abide by the stipulations of the RECSAM Scholar Agreement and follow the requirements of the programme;
ii. They are physically fit and meet the necessary qualifications to attend the course;
iii. They pay a minimum course fee which does not cover airfare, medical expenses, insurance, and extension of visa fees. (For further enquiries, kindly write to Director, SEAMEO RECSAM, Jalan Sultan Azlan Shah, 11700 Gelugor, Penang, Malaysia, or email director@recsam.edu.my; Fax: +604-6522737 or + 604-6522742).

Thank you.

Yours sincerely,

Khor Sim Suan
Deputy Director, Training Programme
for Centre Director
SEAMEO RECSAM

Copies to:
Chairman & Members of RECSAM Governing Board
SEAMEO Affairs Officers, Ministries of Education, SEAMEO Member Countries.
Director, SEAMEO Secretariat, Bangkok 10110, Thailand

* Enclosed please find the following documents for your kind perusal and action:
i. Course description for fiscal year 2018/2019 (Batch 2)
ii. Application form
iii. Medical report form
iv. Scholar Agreement
v. Checklist for the documents to be submitted to SEAMEO RECSAM by each participants

REGULAR COURSES

FOR FISCAL YEAR 2018/2019 (BATCH 2)

1 – 26 APRIL 2019

COURSE DESCRIPTION

REGULAR COURSES FOR FISCAL YEAR 2018/2019
(Batch 2)

1 – 26 April 2019

COURSE CODE	COURSE TITLE	NO. OF SCHOLARSHIPS OFFERED PER COUNTRY
RC-SS-143-3	PURPOSEFUL ASSESSMENT IN SECONDARY SCIENCE CLASSROOMS	1
RC-PM-143-4	ENHANCING SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS (STEM) LEARNING IN PRIMARY MATHEMATICS CLASSROOMS	2

Level	**Subject**
P: Primary	S: Science
S: Secondary	M: Mathematics

SOUTHEAST ASIAN MINISTERS OF EDUCATION ORGANISATION
REGIONAL CENTRE FOR EDUCATION IN SCIENCE AND MATHEMATICS
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Website: http://www.recsam.edu.my/

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IMPORTANT DATES

DATE	ACTION
17 December 2018	Deadline to receive nominations from Ministries of Education
2 – 18 January 2019	Selection of participants by SEAMEO RECSAM
15 – 22 January 2019	Notification of acceptance to successful applicants (via email) **Please ensure email ID provided in participation form are valid.*
31 January 2019	Deadline to receive confirmation of participation form
11 – 20 February 2019	Distribution of e-tickets to the participants
1 April 2019	Course commences
26 April 2019	Course ends

REGULAR COURSES FOR FISCAL YEAR 2018/2019

Course Code: RC-SS-143-3

Course Title: PURPOSEFUL ASSESSMENT IN SECONDARY SCIENCE CLASSROOMS

Rationale:

Assessment is a fundamental issue in science education and perceived to be the driving force in curriculum development and implementation, and in the teaching and learning process in the classroom. Since the new generation of students are required to think critically, justify, evaluate, synthesise, and apply knowledge in new contexts, as well as solve problems, and communicate effectively in a scientific discourse, the structure of the assessment system inevitably needs a deeper look. In addition, accountability for student achievement, emphasis on national and international assessment programmes, and global competition – all contribute to the increased demands for assessment.

Purposeful assessment practices steer teachers and students to understand where they have been, where they are at present, and where they are heading. There is a need to consider the meaningful role of assessment even during the process of teaching and learning rather than considering assessment only upon completion of the teaching and learning process. Thus, the link between science assessment, pedagogies used and instructional practices adopted in the classroom has to be well defined and well established.

The various perspectives assumed by assessment namely, assessment *as* learning, assessment *of* learning, and assessment *for* learning are integral for effective science teaching and learning. Even though they take different forms, overlap and interact, no single assessment method can provide sufficient information to effect positive changes in teaching and learning. The key to purposeful assessment is to align the assessment to the teaching objectives and the instructional approach used and to use different types of assessments as part of instruction results in providing useful information about student understanding and progress.

Objectives

The course aims to equip participants with the knowledge, attitude, skills and habits to operationalise the important role of purposeful assessment in the teaching and learning process. It is hoped that the participants will gain exposure to current and effective research-based assessment strategies and practices that are aligned with established educational theories and routine classroom practices.

At the end of the course, the participants should be able to:

1. gain understanding on the nature, purposes, types, and practices of assessment;
2. explain the interrelationships of assessment with pedagogy and curriculum in the teaching and learning process;
3. discuss the potential influences of international, centralised and school-based assessments to classroom teaching and curriculum development;
4. enhance skills to align current active science teaching and learning approaches that promote higher-order thinking, creative thinking and critical thinking skills to assessment;

5 develop tasks and assessment instruments to gauge students' achievement in science;
6 integrate technology in science assessment; and
7 plan, design and implement science lesson by adapting an instructional design with emphasis on assessment as well as congruency to content and pedagogy.

Course Contents

This course emphasises on a deep grounding of theory and research on the principles, purposes and practices of assessment and learning. The participants will explore on the relationship of assessment to pedagogy, curriculum and instructional practices in the classroom.

The course also focuses on the significance of assessment in planning science lessons and the coherence of the essential components such as lesson objectives formulation, instructional strategy selection and assessment procedure appropriate with the end view of improving student learning and teaching effectiveness. It is essentially activity-oriented and calls for deep reflection of the participants' professional experiences pertaining to the various issues and challenges encountered in the teaching and learning of science. The course activities are designed to cater for discussions, presentations, and hands-on and minds-on sessions.

The major areas include:

1. Trends and Issues in Assessment in Science Education
2. Fundamentals of Assessment
   - 2.1 Nature, Purposes and Practices
   - 2.2 Relationships of Assessment *as* , *for* and *of* Learning
3. Potential Influences of International, National and School-based Assessment in Student Learning
4. Aligning Science Pedagogy and Assessment Practices
   - 4.1 Constructivism and its Implications to Assessment
   - 4.2 Formative and Summative Assessments in Science Classrooms
   - 4.3 Self Assessment and Peer Assessment
5. The Use of Information and Communications Technology in Assessment
6. Enhancing Teacher's Understanding and Practices on the Role of Assessment
   - 6.1 Performance Tasks
   - 6.2 Rubrics
   - 6.3 Importance of Feedback
   - 6.4 Observation Skills
   - 6.5 Questioning Techniques
   - 6.6 Analyses of Students' Work and Homework
   - 6.7 Developing Student Motivation for Learning
7. Planning and Developing Science Lessons, Trying-out and Improving Adopting Appropriate Strategies, Skills and Assessment Practices, through the Lesson Quality Improvement Process.

Duration: Four weeks

Participants: Science Educators or Key Secondary Science Teachers

English Proficiency: Minimum IELTS Band 5.0 or Equivalent and able to Communicate Moderately in English

Expected Output: 1. Project Work Report
2. Multiplier Effect Action Plan

References:

Creemers, B., Kyriakides, L. & Panayiotis, A. (2013). *Teacher professional development for improving quality of teaching*. Springer Science and Business Media Dordrecht

Corrigan, D., Gunstone, R. & Jones, A. (Eds) (2013*). Valuing assessment in science education: Pedagogy, Curriculum*, and Policy. Springer Science and Business Media Dordrecht.

Gardner, J. (Ed) (2012). *Assessment and learning second edition*. SAGE Publication Ltd. London.

Goldston, M.J. & Downey, L. (2013). Your science classroom: Becoming an elementary/middle school science teacher. SAGE: USA

Greenstein, L. (2012). *Assessing 21st century skills: A guide to evaluating mastery and authentic learning*. Corwin. USA

Griffith, A. & Burns, M. (2012). *Outstanding teaching series: Engaging learners*. Crown House Publishing Limited. UK

Llewellyn, D. (2013). T*eaching high school science through inquiry and argumentation 2nd edition*. Corwin. USA

Oversby, J.(Ed) (2012). ASE guide to research in science education. The Association for Science Education, College Lane, Hatfield, Herts AL109AA

Wellington, J. &Ireson, G. (2012). *Science learning, science teaching, 3rd edition*. Routledge: NY

Wiggins, G., &McTighe, J. (2005). *Understanding by Design*. Alexandria, Virginia: Association for Supervision

Course Code: RC-PM-143-4

Course Title: ENHANCING SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS (STEM) LEARNING IN PRIMARY MATHEMATICS CLASSROOMS

Rationale:

The term "Science, Technology, Engineering and Mathematics (STEM) education" refers to teaching and learning in the fields of Science, Technology, Engineering and Mathematics. Students need education with a solid foundation in STEM so that they are prepared to work and live in the 21st century. A STEM education, particularly in enabling mathematics, provide students the foundations to acquire further skills as they make their lifetime transitions to the labour market.

Promoting mathematical processes such as problem solving, reasoning, communication, making connections and representation with STEM approach might bridge the gap between students' interest and how lessons are taught. The research finding in the last two decades show that simulations, animations and game-based-learning provide promising results for improving students' learning outcomes in STEM education. These ICT applications can support STEM education as they provide the platform to teach skills such as critical thinking, multitasking, strategising, problem-solving, and team building. STEM when embedded with ICT has the potential contribution to increase global awareness through collaboration with field experts and Smarter Classrooms, support exploration and experimentation by providing immediate as well as visual feedback, and focus attention on real-world applications of STEM concepts through relevant technologies. Assessment can be integrated directly with learning environments through innovative forms which takes place when using educational animations, simulations and games. The integration of Information and Communication Technologies (ICT) into STEM education is recognised as providing opportunities for developing skills for the 21st century and having the potential to transform pedagogical practices.

Objectives:

The main objective of the course is to provide participants the necessary knowledge and skills in conducting STEM in their own classrooms.

At the end of the course, participants should be able to:

1. acquire basic knowledge on mathematical thinking that promotes STEM education;
2. develop skills necessary to improve teaching and learning of STEM;
3. adopt necessary skills for effective teaching and learning of primary mathematics
4. integrate ICT in STEM Education using tools such as simulations, animations and game-based-learning;
5. assessment for STEM; and
6. use the lesson quality improvement process to develop quality lesson plans that illustrate the integration of computer games in mathematics lessons that promote mathematical thinking.

Course Contents:

This course emphasises a good learning of theory with reflective classroom practices based on STEM. STEM has the potential to increase teachers' and learners' productivity. The knowledge and skills acquired would enable them to initiate STEM for improving primary mathematics classroom practices in their respective schools upon returning to their own countries after this course.

The major areas include:

1 Mathematical Thinking
- 1.1 Issues and Trends in Mathematics Education
- 1.2 Design Activities and Classroom Interactions that Highlight the Mathematical Processes of:
  - 1.2.1 Problem Solving
  - 1.2.2 Reasoning and Proving
  - 1.2.3 Mathematical Connection
  - 1.2.4 Representation
  - 1.2.5 Communication
- 1.3 Metacognition
  - 1.3.1 Metacognitive Knowledge
  - 1.3.2 Metacognitive Representation
  - 1.3.3 Metacognitive Experience

2 Teaching Approaches for Promoting STEM
- 2.1 Structured Problem Solving
- 2.2 Problem Solving [Model and Heuristics]

3 Skills Needed for STEM
- 3.1 Facilitation Skills
- 3.2 Inquiry Skills

4 ICT Integration and Assessment for STEM
- 4.1 Simulations
- 4.2 Animations
- 4.3 Game-based-Learning

5 Assessment for STEM
- 5.1 Technology-based Assessment for STEM Education

6 Lesson Quality Improvement Process
- 6.1 Lesson Quality Improvement Process (Theory into Practice);
- 6.2 Planning, Developing, Trying-out and Improving Quality Lesson Plans that Illustrate the Integration of Simulations, Animations and Games in Mathematics Lessons that Promote Mathematical Thinking in STEM Education;

Duration: Four weeks

Participants: Mathematics Educators or Key Primary Mathematics Teachers

English proficiency: Minimum IELTS Band of 4.5 or Equivalent

Expected output:
1. Project (Research) Work Report
2. Multiplier Effect Action Plan

References:

Atkinson, R., Hugo, J., Lundgren, D., Shapiro, J., & Thomas, J. (2007). Addressing the STEM Challenge by Expanding Specialty Math and Science High Schools. *The Information Technology and Innovation Foundation*, 1-13.

Doerr, H. (2006). Examining the tasks of teaching when using students' mathematical thinking. *Educational Studies in Mathematics, 62(1),* 3-24.

Greenes, C. (1995). Mathematics learning and knowing: A cognitive process. *Journal of Education, 177*(1), 85-106.

Flegg, J., Mallet, D., & Lupton, M. (2012). Students' perception of the relevance of mathematics in engineering. *International Journal of Mathematical Education in Science and Technology, 43*(6), 717-732.

Prediger, S. (2001). Mathematics learning is also intercultural learning. *Intercultural Education, 12*(2), 163-171.

Smetana, L. K., & Bell, R. L. (2012). Computer simulations to support science instruction and learning: A critical review of the literature. *International Journal of Science Education, 34*(9), 1337–1370.

Wolf-Watz, M. (2001). Developing pupil's mathematical thinking: Student teachers' beliefs and conceptions of mathematics education at the end of their initial teacher education, NERA congress in Stockholm.

CONTACT US

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