Higher Colleges of Technology

Common Course Outline

- **Course Title:** Foundation Mathematics I
- **Course Number:** FND M010
- **Course Credit Units:** 4.00
- **Total Contact Periods Per Week:** 6 – 8
- **Degree Level:** New Foundations
- **Course Description:**

  This is the first module of Foundations Math. Module 1 (FND M010) focuses on introducing and developing basic mathematical knowledge, skills and proficiency. The course develops conceptual understanding and procedural fluency and prepares students for Foundations Math 2 (FND M020), the second module, which focuses on further enhancing their knowledge and skills to apply math skills in BAS courses and practical life.

- **Additional Information:**
- **Grading Mode:** N - Normal Grading Mode
- **Prerequisite Course(s):**
- **Co-requisite Course(s):**
- **Equivalent Course(s):**
  - MATH N01M
- **Grade Scale:** HCT Grading Scheme
- **Must Pass:** No
- **Course Learning Outcomes:**
  - CLO 1- Understand and apply basic concepts of Whole Numbers, Fractions and Decimal numbers.
  - CLO 2- Understand and apply basic concepts of Ratio, Proportion & Percentages.
  - CLO 3- Understand and apply basic concepts of Measurement and Data Analysis
  - CLO 4- Understand and apply basic concepts of Geometry
  - CLO 5- Understand and apply basic concepts of Real Numbers
  - CLO 6- Understand and apply basic concepts of Linear Equations, Exponents and Polynomials
- **Delivery Framework:**
  - Key concepts for all learning outcomes to be taught by faculty in class using appropriate teaching and learning strategies.
  - Active learning in class (during the contact hours) by engaging the students in Learn By Doing activities, both hands on and using technology.
  - A minimum 6 hours of independent learning by students per week outside the regular contact hours is required.
  - Collaboration and sharing best practices among teachers.
  - Regular and prompt individualized feedback on student progress using ALEKS generated reports.
  - Technology to be used to enhance the teaching and learning process. It is mandatory for all students to have an iPad or laptop.
  - All assessments are to be conducted on a secure platform Lock down browser for iPads and laptops.
- **Teaching AND Learning Strategies:**

  The contact hours will be used to build strong conceptual understanding, procedural fluency and applied skills for specific learning outcomes. This course requires independent practice, computer based learning and structures blended with regular standard classroom delivery on a need basis. Students must have an internet connection at home as ALEKS is the key resource.

  Assessment and LEarning in Knowledge Spaces (ALEKS) is a web-based, artificially intelligent assessment and learning system. ALEKS uses adaptive questioning to quickly and accurately determine exactly what a student knows and doesn't know in a course. ALEKS then instructs the student on the topics he/she is most
ready to learn. As a student works through a course, ALEKS periodically reassesses the student to ensure that topics learned are also retained. (http://www.aleks.com/about_aleks).

- **Assessment Strategies:**

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<thead>
<tr>
<th>Assessment</th>
<th>Weight</th>
<th>Details</th>
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<tbody>
<tr>
<td><strong>Final Assessment - Test: 80% (FWA)</strong></td>
<td>80%</td>
<td>Final exams are conducted under secure exam conditions at the end of the cycle. (Outcomes: 1, 2, 3, 4, 5, 6)</td>
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<tr>
<td><strong>Coursework - Test: 10%</strong></td>
<td>10%</td>
<td>Pie score from Comprehensive Tests: The Pie score on the final ALEKS comprehensive test taken under exam conditions will be used as part of course work. A minimum of two comprehensive tests will be administered in a cycle. (Outcomes: 1, 2, 3, 4, 5, 6)</td>
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<td><strong>Coursework - Quiz: 10%</strong></td>
<td>10%</td>
<td>Mid-term exam: A Mid-term exam will be administered for all students under secure exam conditions. This exam will cover LOs 1, 2 &amp; 3 of Module 1. The Mid-term is recommended to be done in week 4. (Outcomes: 1, 2, 3)</td>
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**Total Weight: 100%**

- **Required Educational Resources:**
  - Student

- **Additional Educational Resources:**

- **Attachments:**

- **Special Comment:**