**Doctor of Philosophy Program in Applied Mathematics (2010)**

**Name of Degree:** Doctor of Philosophy (Applied Mathematics)

**Abbreviation:** Ph.D. (Applied Mathematics)

**Admission Requirements**

Type 1.1:

Hold a master’s degree (or an equivalent qualification) or a higher graduate diploma with a GPA of at least 3.50 in any fields incorporating at least 12 credits of mathematics or applied mathematics, and have capability to conduct a dissertation; or satisfy additional requirements set by the Curriculum Executive Committee and the Graduate School

Type 1.2:

Hold a bachelor’s degree (or an equivalent qualification) or a graduate diploma with a GPA of at least 3.50 in any fields incorporating at least 24 credits of mathematics or applied mathematics, and have capability to conduct a dissertation; or satisfy additional requirements set by the Curriculum Executive Committee and the Graduate School

Type 2.1:

Hold a master’s degree (or an equivalent qualification) in any fields incorporating at least 12 credits of mathematics or applied mathematics; or satisfy additional requirements set by the Curriculum Executive Committee and the Graduate School

Type 2.2:

Hold a bachelor’s degree (or an equivalent qualification) or a graduate diploma with a GPA of at least 3.25 in any fields incorporating at least 24 credits of mathematics or applied mathematics, and have capability to conduct a dissertation; or satisfy additional requirements set by the Curriculum Executive Committee and the Graduate School

**Curriculum**

**Total Credits**

Type 1.1 48 Credits

Type 1.2 72 Credits

Type 2.1 48 Credits

Type 2.2 72 Credits

**Curriculum Structure**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Subject** | **Number of Credits** | | | |
| **Type 1.1** | **Type 1.2** | **Type 2.1** | **Type 2.2** |
| Required Courses (\*) | 3 (Non-credit) | 3 (Non-credit) | 3 (Non-credit) | 12 |
| Elective Courses (\*\*) | - | - | 12 | 12 |
| Dissertation | 48 | 72 | 36 | 48 |
| **Total** | **48** | **72** | **48** | **72** |

**Type 1.1 and Type 1.2**

|  |  |  |  |
| --- | --- | --- | --- |
| **First Year, 1st Semester** | | **Number of Credits** | |
| **Course Number** | **Course Title** | **Type 1.1** | **Type 1.2** |
| 323 996 | Dissertation | - | 9 |
| 323 997 | Dissertation | 9 | - |
| **Total credits** | | **9** | **9** |
| **Cumulative credits** | | **9** | **9** |

|  |  |  |  |
| --- | --- | --- | --- |
| **First Year, 2nd Semester** | | **Number of Credits** | |
| **Course Number** | **Course Title** | **Type 1.1** | **Type 1.2** |
| 323 996 | Dissertation | - | 9 |
| 323 997 | Dissertation | 9 | - |
| **Total credits** | | **9** | **9** |
| **Cumulative credits** | | **18** | **18** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Second Year, 1st Semester** | | **Number of Credits** | |
| **Course Number** | **Course Title** | **Type 1.1** | **Type 1.2** |
| 323 991\* | Seminar in Applied Mathematics | 3(3-0-6)  (Non-credit) | 3(3-0-6)  (Non-credit) |
| 323 996 | Dissertation | - | 9 |
| 323 997 | Dissertation | 9 | - |
| **Total credits** | | **9** | **9** |
| **Cumulative credits** | | **27** | **27** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Second Year, 2nd Semester** | | **Number of Credits** | |
| **Course Number** | **Course Title** | **Type 1.1** | **Type 1.2** |
| 323 996 | Dissertation | - | 9 |
| 323 997 | Dissertation | 9 | - |
| **Total credits** | | **9** | **9** |
| **Cumulative credits** | | **36** | **36** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Third Year, 1st Semester** | | **Number of Credits** | |
| **Course Number** | **Course Title** | **Type 1.1** | **Type 1.2** |
| 323 996 | Dissertation | - | 9 |
| 323 997 | Dissertation | 9 | - |
| **Total credits** | | **9** | **9** |
| **Cumulative credits** | | **45** | **45** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Third Year, 2nd Semester** | | **Number of Credits** | |
| **Course Number** | **Course Title** | **Type 1.1** | **Type 1.2** |
| 323 996 | Dissertation | - | 9 |
| 323 997 | Dissertation | 3 | - |
| **Total credits** | | **3** | **9** |
| **Cumulative credits** | | **48** | **54** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Fourth Year, 1st Semester** | | **Number of Credits** | |
| **Course Number** | **Course Title** | **Type 1.1** | **Type 1.2** |
| 323 996 | Dissertation | - | 9 |
| 323 997 | Dissertation | - | - |
| **Total credits** | | **-** | **9** |
| **Cumulative credits** | | **48** | **63** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Fourth Year, 2nd Semester** | | **Number of Credits** | |
| **Course Number** | **Course Title** | **Type 1.1** | **Type 1.2** |
| 323 996 | Dissertation | - | 9 |
| 323 997 | Dissertation | - | - |
| **Total credits** | | **-** | **9** |
| **Cumulative credits** | | **48** | **72** |

**Type 2.1 and Type 2.2**

|  |  |  |  |
| --- | --- | --- | --- |
| **First Year, 1st Semester** | | **Number of Credits** | |
| **Course Number** | **Course Title** | **Type 2.1** | **Type 2.2** |
| 323 721\* | Real Analysis | - | 3(3-0-6) |
| 323 722\* | Functional Analysis and Applications | - | 3(3-0-6) |
| 323 829\*\* | Advanced Topics in Analysis | 3(3-0-6) | - |
| 323 841\*\* | Advanced Topics in Applied Mathematics | 3(3-0-6) | - |
| 323 844\*\* | Optimization Methods | 3(3-0-6) | 3(3-0-6) |
| **Total credits** | | **9** | **9** |
| **Cumulative credits** | | **9** | **9** |

|  |  |  |  |
| --- | --- | --- | --- |
| **First Year, 2nd Semester** | | **Number of Credits** | |
| **Course Number** | **Course Title** | **Type 2.1** | **Type 2.2** |
| 323 731\* | Theory of Ordinary Differential Equation | - | 3(3-0-6) |
| 323 761\* | Advanced Numerical Analysis | - | 3(3-0-6) |
| 323 865\*\* | Advanced Topics in Numerical Analysis | 3(3-0-6) | 3(3-0-6) |
| 323 998 | Dissertation | - | - |
| 323 999 | Dissertation | 6 | - |
| **Total credits** | | **9** | **9** |
| **Cumulative credits** | | **18** | **18** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Second Year, 1st Semester** | | **Number of Credits** | |
| **Course Number** | **Course Title** | **Type 2.1** | **Type 2.2** |
| 323 991\* | Seminar in Applied Mathematics | 3(3-0-6)  (Non-credit) | 3(3-0-6)  (Non-credit) |
| 323 829\*\* | Advanced Topics in Analysis | - | 3(3-0-6) |
| 323 841\*\* | Advanced Topics in Applied Mathematics | - | 3(3-0-6) |
| 323 998 | Dissertation | - | 3 |
| 323 999 | Dissertation | 9 | - |
| **Total credits** | | **9** | **9** |
| **Cumulative credits** | | **27** | **27** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Second Year, 2nd Semester** | | **Number of Credits** | |
| **Course Number** | **Course Title** | **Type 2.1** | **Type 2.2** |
| 323 998 | Dissertation | - | 9 |
| 323 999 | Dissertation | 9 | - |
| **Total credits** | | **9** | **9** |
| **Cumulative credits** | | **36** | **36** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Third Year, 1st Semester** | | **Number of Credits** | |
| **Course Number** | **Course Title** | **Type 2.1** | **Type 2.2** |
| 323 998 | Dissertation | - | 9 |
| 323 999 | Dissertation | 9 | - |
| **Total credits** | | **9** | **9** |
| **Cumulative credits** | | **45** | **45** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Third Year, 2nd Semester** | | **Number of Credits** | |
| **Course Number** | **Course Title** | **Type 2.1** | **Type 2.2** |
| 323 998 | Dissertation | - | 9 |
| 323 999 | Dissertation | 3 | - |
| **Total** | | **3** | **9** |
| **cumulative credits** | | **48** | **54** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Fourth Year, 1st Semester** | | **Number of Credits** | |
| **Course Number** | **Course Title** | **Type 2.1** | **Type 2.2** |
| 323 998 | Dissertation | - | 9 |
| 323 999 | Dissertation | - | - |
| **Total credits** | | **-** | **9** |
| **Cumulative credits** | | **48** | **63** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Fourth Year, 2nd Semester** | | **Number of Credits** | |
| **Course Number** | **Course Title** | **Type 2.1** | **Type 2.2** |
| 323 998 | Dissertation | - | 9 |
| 323 999 | Dissertation | - | - |
| **Total credits** | | **-** | **9** |
| **Cumulative credits** | | **48** | **72** |

**Program Lecturers**

1. Assoc. Prof. Dr. Supot Waitayangkurn

2. Asst. Prof. Dr. Angkana Boonyued

3. Asst. Prof. Dr. Banchar Arnonkijpanich

4. Asst. Prof. Dr. Kamsing Nonlaopon

5. Asst. Prof. Dr. Kanit Mukdasai