### MODULE HANDBOOK

**Wavelet and Applications**

<table>
<thead>
<tr>
<th>Module name</th>
<th>Wavelet and Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module level</td>
<td>Postgraduate</td>
</tr>
<tr>
<td>Code</td>
<td>KM185379</td>
</tr>
<tr>
<td>Course (if applicable)</td>
<td>Wavelet and Applications</td>
</tr>
<tr>
<td>Semester</td>
<td>Fall</td>
</tr>
</tbody>
</table>
| Person responsible for the module | Dr. Mahmud Yunus, M.Si  
                        | Dr. Dwi Ratna Sulistyaningrum, MT |
| Lecturer          | Dr. Mahmud Yunus, M.Si  
                        | Dr. Dwi Ratna Sulistyaningrum, MT |
| Language          | Bahasa Indonesia and English |
| Relation to curriculum | Master degree program, Elective, 3rd semester. |
| Type of teaching, contact hours | Lectures, <60 students |
| Workload          | 1. Lectures: 3 x 50 = 150 minutes per week.  
                        2. Exercises and Assignments: 3 x 60 = 180 minutes (3 hours) per week.  
                        3. Private learning: 3 x 60 = 180 minutes (3 hours) per week. |
| Credit points     | 3 credit points (sks)    |
| Requirements according to the examination regulations | A student must have attended at least 80% of the lectures to sit in the exams. |
| Mandatory prerequisites | -                      |
| Learning outcomes and their corresponding PLOs | Course Learning Outcome (CLO) after completing this module,  
1. Students are able to explain the formal verification methods and models system where formal verification methods can be applied.  
2. Students are able to explain some of the methods of verification systems and the development of a system of verification methods.  
3. Students can apply the model checking system model transitions, both theoretically and using software  
4. Students are able to explain and apply various algorithms on system verification. |
| --- | --- |
| Content | Subject:  
1. multiresolution analysis  
2. Orthogonal wavelet  
3. filter Bank |
| Study and examination requirements and forms of examination | ● In-class exercises  
● Assignment 1, 2, 3  
● Mid-term examination  
● Final examination |
| Media employed | LCD, whiteboard, websites (myITS Classroom), zoom. |
| Reading list | Text book and related paper |