APPENDIX A

STRUCTURE OF THE MODULES

PART 2: Students from Åbo Akademi going to ESIGELEC

 Åbo Akademi requirements:

<table>
<thead>
<tr>
<th>Module</th>
<th>Required ECTS</th>
<th>From AA</th>
<th>From Esigelec</th>
<th>Total</th>
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<tbody>
<tr>
<td>1. Advanced module</td>
<td>8</td>
<td>12</td>
<td>20</td>
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<tr>
<td>2. Compulsory advanced module</td>
<td>15</td>
<td>5</td>
<td>20</td>
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<tr>
<td>3. Project course</td>
<td>10</td>
<td>-</td>
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<tr>
<td>4. Compulsory intermediate studies</td>
<td>5</td>
<td>15</td>
<td>20</td>
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<td>5. Compulsory language courses</td>
<td>-</td>
<td>8</td>
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<td>6. Free optional courses</td>
<td>6</td>
<td>6</td>
<td>12</td>
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<td>7. Master’s thesis</td>
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<td>30</td>
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<td>TOTAL</td>
<td></td>
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<td>120</td>
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Academic calendar:

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<tbody>
<tr>
<td>Year 1</td>
<td>Periods I, II, III and IV at Åbo Akademi</td>
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<tr>
<td>Year 2</td>
<td>Engineering Cycle (2nd year, semesters 1 &amp; 2) at ESIGELEC</td>
<td>Internship 2 from 2 to 3 months</td>
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<td>Year 3</td>
<td>Engineering Cycle (3rd year, semester 1) at ESIGELEC</td>
<td>Final internship/project – MSc. Thesis from 6 to 9 months</td>
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Structure of the modules:

- **Advanced module in Embedded Systems 20 ECTS**
  - From Esigelec: 12 ECTS selectable from
    - (ISE201-A) Binary Logic and VHDL (in English) (Y2,S2): 3 ECTS
    - (ISE202-A) Embedded Linux and Real-time (in English) (Y2, S2): 2 ECTS
    - (SE2C1-F) Microprocessor architecture (Y2,S1): 3 ECTS
    - (ISE302-A) Reconfigurable Systems (in English) (Y3,S1): 2 ECTS
    - (ISE301-A) Embedded Systems (in English) (Y3,S1): 2 ECTS
    - (ISE303-F) Linux and Embedded Systems (Y3,S1): 1 ECTS
    - (ES21-A) Methodology using case studies (in English) (Y3,S1): 1 ECTS
    - (ES22-F) EMC for Embedded Systems (Y3,S1): 1ECTS
    - (ES23-F) DSP (Y3,S1): 1ECTS
    - (ES24-A) Embedded applications for Android (in English) (Y3,S1): 1 ECTS
    - (ES25-A) Advanced LabView development (Y3,S1): 1 ECTS
  - From Åbo Akademi: a minimum of 8 ECTS selectable from:
    - 453501.0 Digital Television Techniques: 5 ECTS
    - 453503.0 Modeling of Embedded Systems: 5 ECTS
    - 453506.0 Design methods for energy efficient embedded systems: 5 ECTS
    - 454506.0 Applied signal processing: 5+4 ECTS
    - 453600.0 Introduction to Manycore Programming: 5ECTS
    - 453505.0 Multimedia Algorithm Implementation: 5 ECTS
    - Special work in Embedded Systems: 2-5 ECTS

- **Compulsory advanced module: 20 ECTS**
  - From Åbo Akademi: 15 ECTS selectable from:
    - 400107.0 Applied discrete mathematics: 5 ECTS
    - 456514.0 Experimentation in engineering: 5 ECTS
    - 454300.0 Basic course in signal processing: 5 ECTS
    - 455303.0 Parallel programming: 5 ECTS
  - From Esigelec:
    - Signal Processing: a minimum of 5 ECTS selectable from:
      - **In French**
        - (TS2C1-F) Signal processing (Y2, S1): 2 ECTS
        - (EL2C1-F) Analog filtering (Y2, S1): 2 ECTS
        - (EL2C3-F) Analog to digital conversion (Y2,S1): 2 ECTS
        - (EL2C5-F) Modulation (Y2, S1): 2ECTS

- **Compulsory project course: 10 ECTS**
  - From Åbo Akademi: 10 ECTS
    - 451000.0 Project course: 10 ECTS

- **Compulsory Intermediate Studies: 20 ECTS**
  - From Esigelec: a minimum of 15 ECTS selectable from:
    - (IN2C1-F) Network interconnections (Y2, S1) : 2 ECTS
    - (GE2C1-F)/(GE2C2-F) Automation Engineering I (Y2, S1): 2 ECTS
    - (ISE203-A) Tools and Methods for Software (in English) (Y2,S2): 3 ECTS
    - (ISE204-A) Communication buses (in English) (Y2,S2): 2 ECTS
    - (ISE205-A) Innovation with Android (in English) (Y2,S2): 3 ECTS
    - (ISE207-A) Localisation and trajectory (in English) (Y2,S2): 3 ECTS
    - (ISE306-F) Communication systems (Y3,S2): 1 ECTS
    - (ISE307-F) Lab. communication systems (Y3,S2): 1 ECTS
- (PI2C1-F) Engineering project (Y2,S2): 4 ECTS
- (C02C1-F) Project management (Y2,S2): 2 ECTS

- From Åbo Akademi (*in Swedish*): a minimum of 5 ECTS selectable from:
  - 452303.0 Practicum in Software Engineering: 5 ECTS
  - 452306.0 Programming paradigms: 5 ECTS
  - 452307.0 System design II: 5 ECTS
  - 456306.0 Compiler technology: 5 ECTS

- **Compulsory language courses: 8 ECTS**
  - From ESIGELEC: 8 ECTS
    - French as a foreign language: 5 ECTS
    - English: 3 ECTS

- **Free optional courses 12 ECTS**
  - From Esigelec: 6 ECTS
    - Any courses offered by Esigelec
  - From Åbo Akademi: 6 ECTS
    - Any courses offered by Åbo Akademi University.

- **Master's thesis 30 ECTS**
  - Has to be graded and approved by Åbo Akademi and by ESIGELEC

The above structure is based on 2014-2015 syllabus of ESIGELEC and 2014-2015 syllabus of Åbo Akademi. It may be subject to possible annual updates and modifications.