TABLE OF CONTENTS

INTRODUCTION 3
PROGRAMME 15 JANUARY 6
PROGRAMME 16 JANUARY 7

TEACHERS 8
ORGANIZATION 9

LECTURES 10
COURSE AND DAY INTRODUCTION 12
OFFSHORE WIND IN PERSPECTIVE 13
DESIGN CONSIDERATIONS 14
DATA COLLECTION AND PROCESSING 15
WIND TO POWER 16
KEY CONSIDERATIONS FOR WIND TURBINE SELECTION 17
DESIGN OF AN OFFSHORE WIND FARM LAYOUT 18
OFFSHORE POWER NETWORKS 19
KEY CONSIDERATIONS SUPPORT STRUCTURE DESIGN 20
FLOATING SUPPORT 21
COST VERSUS INCOME 22

WORKSHOPS 24
SITE DATA 26
DESIGN YOUR OWN ROTOR I 27
DESIGN YOUR OWN ROTOR II 28
WIND TURBINE SELECTION 29
WAKE EFFECT 30
POWER NETWORK DESIGN 31
PROGRAMME

TUESDAY 15 JANUARY

9:00  Course and day introduction  
      Hendrik Goos

9:30  Lecture: Offshore wind in perspective  
      Niek Meurs

10:00 Lecture: Design considerations  
      Thijs Kamphuis

10:30 Break

10:45 Lecture: Data collection and processing  
      Thijs Kamphuis

11:30 Workshop: Site data  
      Thijs Kamphuis

12:30 Lunch

13:30 Workshop: Design your own rotor I  
      Hendrik Goos, Niek Meurs, Thijs Kamphuis

14:15 Lecture: Wind to power  
      Hendrik Goos

15:00 Workshop: Design your own rotor II  
      Hendrik Goos, Niek Meurs, Thijs Kamphuis

15:15 Break

15:30 Lecture: Key considerations for wind turbine selection  
      Niek Meurs

16:00 Workshop: Wind turbine selection  
      Hendrik Goos, Niek Meurs, Thijs Kamphuis

17:00 Q&A day 1  
      Hendrik Goos, Niek Meurs, Thijs Kamphuis
PROGRAMME

WEDNESDAY 16 JANUARY

9:00 Day introduction
Hendrik Goos

9:15 Lecture: Design of an offshore wind farm layout
Thijs Kamphuis

10:00 Workshop: Wake effect
Hendrik Goos

10:30 Break

10:45 Lecture: Offshore power networks
Hendrik Goos

11:30 Workshop: Power network design
Hendrik Goos, Niek Meurs, Thijs Kamphuis

12:30 Lunch

13:30 Lecture: Key considerations support structure design
Thijs Kamphuis

14:15 Lecture: Floating wind turbines
Thijs Kamphuis

15:00 Break

15:15 Lecture: Cost versus income
Niek Meurs

15:45 Q&A day 2
Hendrik Goos, Niek Meurs, Thijs Kamphuis

16:15 Award ceremony
Hendrik Goos, Niek Meurs, Thijs Kamphuis

16:45 Wrap up and drinks
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRODUCTION</td>
<td>3</td>
</tr>
<tr>
<td>PROGRAMME 17 JANUARY</td>
<td>6</td>
</tr>
<tr>
<td>PROGRAMME 18 JANUARY</td>
<td>7</td>
</tr>
<tr>
<td>TEACHERS</td>
<td>8</td>
</tr>
<tr>
<td>ORGANIZATION</td>
<td>9</td>
</tr>
<tr>
<td>LECTURES</td>
<td>10</td>
</tr>
<tr>
<td>COURSE AND DAY INTRODUCTION</td>
<td>12</td>
</tr>
<tr>
<td>EUROPEAN OFFSHORE WIND DRIVERS</td>
<td>13</td>
</tr>
<tr>
<td>OFFSHORE WIND FARM LIFECYCLE</td>
<td>14</td>
</tr>
<tr>
<td>TENDERING AND CONSORTIA</td>
<td>15</td>
</tr>
<tr>
<td>CONSTRUCTION, FABRICATION AND TRANSPORTATION</td>
<td>16</td>
</tr>
<tr>
<td>PORTS, HARBOURS AND FACILITIES</td>
<td>17</td>
</tr>
<tr>
<td>TRANSPORT EQUIPMENT</td>
<td>18</td>
</tr>
<tr>
<td>OFFSHORE INSTALLATION VESSELS AND INSTALLATION PRACTICES</td>
<td>19</td>
</tr>
<tr>
<td>FAILURES</td>
<td>20</td>
</tr>
<tr>
<td>OPERATION AND MAINTENANCE</td>
<td>21</td>
</tr>
<tr>
<td>CONTRACTING &amp; INSURANCE</td>
<td>22</td>
</tr>
<tr>
<td>COSTS VERSUS INCOME</td>
<td>23</td>
</tr>
<tr>
<td>HEALTH, SAFETY AND ENVIRONMENT</td>
<td>24</td>
</tr>
<tr>
<td>TRENDS AND FUTURE INNOVATIONS</td>
<td>25</td>
</tr>
<tr>
<td>WORKSHOPS</td>
<td>26</td>
</tr>
<tr>
<td>TENDER GAME</td>
<td>28</td>
</tr>
<tr>
<td>SEAFASTENING</td>
<td>29</td>
</tr>
<tr>
<td>OPERATION AND MAINTENANCE</td>
<td>30</td>
</tr>
<tr>
<td>LCOE CALCULATION</td>
<td>31</td>
</tr>
</tbody>
</table>
PROGRAMME

THURSDAY 17 JANUARY

9:00      Course and day introduction
          Hendrik Goos

9:30      Lecture: European offshore wind drivers
          Thijs Kamphuis

10:00     Lecture: Offshore wind farm lifecycle
          Hendrik Goos

10:30     Break

10:45     Lecture: Tendering and consortia
          Thijs Kamphuis

11:15     Workshop: Tender game
          Hendrik Goos, Niek Meurs, Thijs Kamphuis

12:30     Lunch

13:30     Lecture: Construction, fabrication and transportation
          Niek Meurs

14:15     Lecture: Ports, harbours and facilities
          Hendrik Goos

14:45     Break

15:00     Lecture: Transport equipment
          Thijs Kamphuis

15:45     Workshop: Seafastening
          Hendrik Goos, Niek Meurs, Thijs Kamphuis

16:30     Lecture: Offshore installation vessels and installation practices
          Hendrik Goos

17:00     Q&A day 3
          Hendrik Goos, Niek Meurs, Thijs Kamphuis
PROGRAMME

FRIDAY 18 JANUARY

9:00  Day introduction
      Hendrik Goos, Niels Meurs, Thijjs Kamphuis

9:15  Lecture: Failures
      Niels Meurs

10:00 Lecture: Operation and maintenance
      Niels Meurs

10:30 Break

10:45 Workshop: Operation and maintenance
      Niels Meurs

11:45 Lecture: Contracting & Insurance
      Thijjs Kamphuis

12:30 Lunch

13:30 Lecture: Costs versus income
      Thijjs Kamphuis

14:00 Workshop: LCoE calculation
      Thijjs Kamphuis

15:00 Break

15:15 Lecture: Health, safety and environment
      Hendrik Goos

16:00 Lecture: Trends and future innovations
      Hendrik Goos

16:30 Q&A day 3
      Hendrik Goos, Niels Meurs, Thijjs Kamphuis

17:00 Award ceremony
      Hendrik Goos, Niels Meurs, Thijjs Kamphuis

17:30 Wrap up and drinks
TEACHERS

HENDRIK GOOS
Hendrik has worked in the Marine and Offshore Industry in various roles since 1986. He is experienced in setting up educational programmes on offshore topics and is committed to meeting the needs of the offshore industry with this.

THIJS KAMPHUIS
Thij is a teacher and researcher at DOB-Academy and holds an MSc in offshore engineering. Field of interest: offshore wind turbines, and graduated on vibration installation of monopiles and the slip joint connection.

NIEK MEURS
Niek is a researcher at DOB-Academy in the field of installation and logistics. He is currently investigating operation and maintenance strategies for large offshore wind farms.
ORGANIZATION

KEN KITAZATO

Ken speaks Japanese, English and Dutch.