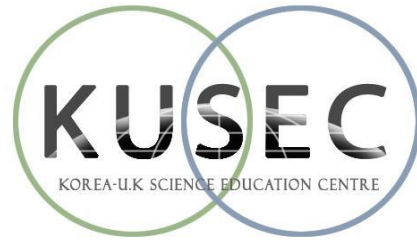




**Advanced Manufacturing Research Centre**



## **International Industrial Internship Programme - The AMRC with Boeing in UK (4 Weeks)**

**(21/06/2015, Sunday – 18/07/2015, Saturday)**

**January 20<sup>th</sup>, 2015**

**The AMRC with Boeing  
Advanced Manufacturing Park  
Wallis Way, Catcliffe, Rotherham S60 5TZ  
United Kingdom**

## Overall International Industrial Internship Programme (IIIP) - The AMRC with Boeing in UK (4 Weeks)

(22/June/2015 – 17/July/2015)

### Student Group 1

|                  | <b>Week 1</b><br>(22-26/June/2015)  | <b>Week 2</b><br>(29/June-03/July/2015) | <b>Week 3</b><br>(06-10/July/2015)   | <b>Week 4</b><br>(13-17/July/2015) |
|------------------|---|---|--|------------------------------------|
| <b>Monday</b>    | Orientation/<br>The AMRC Tour   |   | Seminar Session  | Seminar Session                    |
| <b>Tuesday</b>   | Seminar Session   |   | Industrial Workshop 2 (6 Days)<br>IMG*, PTG* , CTI* , Design & Prototyping<br>Centre, Nuclear AMRC, Structural Testing<br>Centre |                                    |
| <b>Wednesday</b> | Industrial Workshop 1 (6 Days)<br>- Composite Centre<br>(Manufacturing Snowboard) |   |  |                                    |
| <b>Thursday</b>  |   |   |  |                                    |
| <b>Friday</b>    | Industry Field Trip<br>Airbus, Broughton<br>(TBC)                                 | Tour of Sheffield<br>University         | Industry Field Trip<br>Jaguar- Land Rover<br>(TBC)   | Wrap up/<br>Certificates           |

(\* IMG: Integrated Manufacturing Centre, PTG: Process Technology Centre, CTI: Casting Technology International)

The programme schedule and contents are draft and may be changed depending on the availability of each centre.

### Student Group 2

|                  | <b>Week 1</b><br>(22-26/June/2015)   | <b>Week 2</b><br>(29/June-03/July/2015) | <b>Week 3</b><br>(06-10/July/2015)  | <b>Week 4</b><br>(13-17/July/2015) |
|------------------|--|---|---|------------------------------------|
| <b>Monday</b>    | Orientation/<br>The AMRC Tour  |   | Seminar Session   | Seminar Session                    |
| <b>Tuesday</b>   | Seminar Session  |   | Industrial Workshop 2 (6 Days)<br>- Composite Centre<br>(Manufacturing Snowboard) |                                    |
| <b>Wednesday</b> | Industrial Workshop 1 (6 Days)<br>IMG*, PTG* , CTI* , Design & Prototyping<br>Centre, Nuclear AMRC, Structural Testing<br>Centre |   |   |                                    |
| <b>Thursday</b>  |  |   |   |                                    |
| <b>Friday</b>    | Industry Field Trip<br>Airbus, Broughton<br>(TBC)  | Tour of Sheffield<br>University         | Industry Field Trip<br>Jaguar- Land Rover<br>(TBC)                                | Wrap up/<br>Certificates           |

(\* IMG: Integrated Manufacturing Centre, PTG: Process Technology Centre, CTI: Casting Technology International)

The programme schedule and contents is draft and may be changed depending on the availability of each centre.

# **Detailed International Industrial Internship Programme (IIIP) - The AMRC with Boeing in UK (4 Weeks)**

## **Week 1 (22/June/2015 - 26/June/2015)**

### **- Seminar Session (Orientation)**

#### **Monday**

09:30 – 10:00 Registration at The Reception of FOF (Factory of Future)

10:00 – 10:30 Welcome Speech & General Overview

10:30 – 11:00 Tea Break

11:00 – 12:00 Introduction of Students & AMRC staffs/Information on Health & Safety

(Presentation from each student for 2 minutes)

12:00 – 13:00 Lunch

13:00 – 15:00 Quick Site Tour - AMRC with Boeing (Composite Centre, Process Technology Centre, Aerospace Structural Testing Centre, Integrated Manufacturing Centre), Nuclear AMRC, AMRC Training Centre, Design and Prototyping Centre, KTC (Knowledge Transfer Centre), CTI (Casting Technology International)

15:00 – 15:30 Tea Break

15:30 – 16:30 Overview of Composite Centre

### **- Seminar Session**

#### **Tuesday**

09:30 – 10:30 Overview of Process Technology Centre

10:30 – 10:45 Tea Break

10:45 – 11:45 Overview of Casting Technology International Centre

11:45 – 12:30 Overview of Integrated Manufacturing Centre

12:30 – 13:30 Lunch

13:30 – 14:30 Overview of Design & Prototyping Centre

14:30 – 14:45 Tea Break

14:45 – 15:45 Overview of Nuclear Manufacturing Centre

15:45 – 16:30 Overview of Structural Testing Centre

- **Industrial Workshop Session (Composite Centre - Manufacturing Snowboard)**

### **Wednesday**

09:30 – 10:30 Composite Manufacturing Fundamentals (Seminar)

10:30 – 10:45 Tea Break

10:45 – 12:00 CAD/CAM Machining Demo, Snowboard Pattern

12:00 – 13:00 Lunch

13:00 – 14:30 CAD/CAM Machining Demo, Snowboard Pattern

14:30 – 15:30 Get Pattern on CMS

15:30 – 15:45 Tea Break

15:45 – 16:30 Get Pattern on CMS

### **Thursday**

09:30 – 10:30 Quality Control Fundamentals (Seminar)

10:30 – 10:45 Tea Break

10:45 – 12:00 Cut Plies for Tool and Clean Seal and Release Pattern

12:00 – 13:00 Lunch

13:00 – 16:00 Lay up Snowboard Tool

16:00 – 16:30 Wrap up/Discussions

- **Industry Field Trip**

### **Friday**

9:30 – 17:30 Airbus, Broughton (TBC)

## **Week 2 (29/June/2015 – 03/July/2015)**

- **Industrial Workshop Session (Composite Centre - Manufacturing Snowboard)**

### **Monday**

9:30 – 12:00 Lay up snowboard Tool

12:00 – 13:00 Lunch

13:00 – 16:00 Bag up Snowboard Tool

16:00 – 16:30 Wrap up/Discussion

### **Tuesday**

09:30 – 10:30 Composite Workshop Good Practice (Seminar)

10:30 – 10:45 Tea Break

10:45 – 12:00 Demould Snowboard Tool and Post Cure

12:00 – 13:00 Lunch

13:00 – 15:30 Cut Plies for Snowboard

15:30 – 15:45 Tea Break

15:45 – 16:30 Cut Plies for Snowboard

### **Wednesday**

09:30 – 10:30 Release Tool for Snowboard/Ready to Lay Up

10:30 – 10:45 Tea Break

10:45 – 12:00 Lay Up Snowboard

12:00 – 13:00 Lunch

13:00 – 16:00 Lay up Snowboard Tool

16:00 – 16:30 Wrap up/Discussions

### **Thursday**

9:30 – 12:00 Bag Up/Cure Snowboard

12:00 – 13:00 Lunch

13:00 – 16:00 Bag Up/Cure Snowboard

16:00 – 16:30 Demould & Finishing The Cured Snowboard

**Friday**

10:00 – 16:00 Tour of Sheffield University

**Week 3 (06/July/2015 – 10/July/2015)**

- **Seminar Session**

**Monday**

09:30 – 10:30 The Partnership (The AMRC)

10:30 – 10:45 Tea Break

10:45 – 12:00 Overview of Industrial Doctorate Training Centre

12:00 – 13:00 Lunch

13:00 – 14:15 Interaction with Local & National Government

14:15 – 14:45 Tea Break

14:45 – 16:00 Tech Fellow Conference & Generic Funding

16:00 – 16:30 Wrap up/Discussion

- **Industrial Workshop Session (Process Technology Centre (PTG), Design And Prototyping Centre, Testing Centre, Integrated Manufacturing Centre (IMG) and Casting Technology International (CTI))**

**Tuesday (PTG Workshop Demonstration)**

09:30 – 10:30 Machining Process Fundamentals

10:30 – 10:45 Tea Break

10:45 – 12:00 Introduction on Workshop & Tour The Site

12:00 – 13:00 Lunch

13:00 – 14:30 Workshop

14:30 – 15:30 Workshop

15:30 – 15:45 Tea Break

15:45 – 16:30 Wrap up/Discussion

**Wednesday (Design And Prototyping Centre Workshop)**

09:30 – 10:30 Design & Prototyping Fundamentals

10:30 – 10:45 Tea Break

10:45 – 12:00 Introduction on Workshop & Tour of The Site

12:00 – 13:00 Lunch

13:00 – 16:00 Workshop (3D Printing)

16:00 – 16:30 Wrap up/Discussions

**Thursday (Design And Prototyping Centre / Nuclear Manufacturing Centre Workshop)**

09:30 – 11:00 Workshop (Laser Cutting)

11:00 – 11:15 Tea Break

11:15 – 12:30 Workshop (5 axis Grinding)

12:30 – 13:30 Lunch

13:30 – 16:00 Nuclear Manufacturing Centre for Details

16:00 – 16:30 Wrap up/Discussion

- **Industry Field Trip**

**Friday**

9:30 – 17:30 Jaguar-Land Rover (TBC)

**Week 4 (13/July/2015 – 17/Feb/2015)**

- **Seminar Session**

**Monday**

09:30 – 10:30 Quality Management

10:30 – 10:45 Tea Break

10:45 – 12:00 Business Interactions

12:00 – 13:00 Lunch

13:00 – 14:00 Contract Management

14:00 – 15:00 3D Virtual Reality

15:00 – 15:30 Tea Break

15:30 – 16:00 Wrap up/Discussion

- **Industrial Workshop Session (Process Technology Centre (PTG), Design And Prototyping Centre, Structural Testing Centre, Integrated Manufacturing Centre (IMG) and Casting Technology International (CTI))**

#### **Tuesday (IMG Workshop)**

09:30 – 10:30 Integrated Manufacturing Fundamentals

10:30 – 10:45 Tea Break

10:45 – 12:00 Introduction on Workshop & Tour The Site

12:00 – 13:00 Lunch

13:00 – 16:00 Workshop

16:00 – 16:30 Wrap up/Discussion

#### **Wednesday (CTI / Waterjet/ Micro Lab Workshop)**

09:30 – 10:30 Casting Technology Fundamentals

10:30 – 10:45 Tea Break

10:45 – 12:00 Introduction on Workshop & Tour The Site

12:00 – 13:00 Lunch

13:00 – 14:30 Waterjet Cutting

14:30 – 14:45 Tea Break

14:30 – 16:00 Micro Lab

16:00 – 16:30 Wrap up/Discussions

#### **Thursday (Structural Testing Centre Workshop)**

9:30 – 10:30 Structural Testing Fundamentals

10:30 – 10:45 Tea Break



10:45 – 12:00 Introduction on Workshop & Tour The Site

12:00 – 13:00 Lunch

13:00 – 16:00 Workshop

16:00 – 16:30 Wrap up/Discussion

**Friday**

9:30 – 10:30 Q&A and Recap

10:30 – 10:50 Tea Break

10:50 – 12:00 Certificates & Feedback from Delegates

12:00 – 13:00 Lunch

**Programme Completed**

## - Quotation

### International Industrial Internship Programme at The AMRC with Boeing in UK (4 Weeks)

- Project period: 20 working days (4 weeks)
- Date: 21/06/2015 – 18/07/2015
- Minimum no. of attendants: 15 - 20
- Venue: The AMRC with Boeing, United Kingdom
- Organized by KUSEC (Korea-UK Science & Education Centre)

| Items  | Cost (£)/student | Ref |
|--|------------------|-----|
| <ul style="list-style-type: none"> <li>• <b>International Industrial Internship Programme (20 working days, 4 weeks)</b> <ul style="list-style-type: none"> <li>- Seminar sessions (5 days), industrial workshops (12 days) &amp; industry field trips (3 days)</li> <li>- Programme administration, supervision and support</li> <li>- Office for 12 participated students</li> <li>- Workshop materials for manufacturing snowboards &amp; demonstrations</li> <li>- Workshop equipment for manufacturing snowboards &amp; demonstration</li> <li>- Wi-Fi</li> <li>- Lunch (20 times) &amp; Tea</li> <li>- Industry field trip expenses, including transportation &amp; lunch (Airbus, Jaguar Land Rover &amp; The university of Sheffield to be confirmed)</li> <li>- Supplies &amp; miscellaneous</li> </ul> </li> </ul> | 2400             | -   |
| <ul style="list-style-type: none"> <li>• <b>Accommodation (Check-in: 21/June/2015, 27 nights)</b> <ul style="list-style-type: none"> <li>- Family Bedroom (triple occupants) with hot breakfast &amp; free Wi-Fi at a good quality hotel</li> </ul> </li> </ul>  | 980              | -   |
| <ul style="list-style-type: none"> <li>• <b>Airport Pick-up &amp; Drop-off</b></li> </ul>  | 120              | -   |
| <b>Total</b>   | <b>3500</b>      | -   |