**Global Learning Initiatives Program Course Syllabus**

**Course Information**

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| Course Name | Introduction to Makers (CITE215) |
| Lecturer(s) | Prof. Juhong Park |
| Course Description | Through training in a variety of modern Fast Prototyping techniques and equipment, students  Provide opportunities to implement and create projects of their own design, and each week students do simple hands-on exercises to bring their ideas to life  understand the entire manufacturer design process by |
| Course Objectives | Introduction to Analog and Digital Tools for Fast Prototyping  Digital Fabrication Process understand and utilize  Understanding and practical training of manufacturer-related processing equipment |
| Suggested Proficiencies | 3D CAD Modeling using Rhino 3D, 3DS Max, Maya, Sketchup, or Inventor.  Programming Skills such as Python, Java, or C/C++/C#  Object Oriented Programming |
| Reading List | 3D printer 101 Everything about 3D printers, from basics to utilization (Hanbit Media/2018)  The 3D Printing Handbook. Technologies, design and applications. Ben Redwood (3D Hubs/2017)  The Second Machine Age, Eric Branwolfson (Chunglim Publishing/2014)  Race Against the Machine, Eric Branwolfson (growth/2013) |
| Grading Criteria | Attendance 50%  Class participation rate 30%  Final Rating 20% |

**Course Schedule**

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| Class  (Week) | Date | Course Topic | Lecturer |
| 1 | Week 1 | Introduction | *Prof. Juhong Park* |
| 2 | Week 2 | CAD/CAM Rhino 3D | *Prof. Juhong Park* |
| 3 | Week 3 | Electronic Production: PCB + CNC | *Prof. Juhong Park* |
| 4 | Week 4 | Visual Programming - Grasshopper | *Prof. Juhong Park* |
| 5 | Week 5 | Laser Cutting | *Prof. Juhong Park* |
| 6 | Week 6 | Wood Working | *Prof. Juhong Park* |
| 7 | Week 7 | 3D Printing | *Prof. Juhong Park* |
| 8 | Week 8 | 3 AX Milling | *Prof. Juhong Park* |
| 9 | Week 9 | 5 AX Milling | *Prof. Juhong Park* |
| 10 | Week 10 | Sewing | *Prof. Juhong Park* |
| 11 | Week 11 | Molding + Casting | *Prof. Juhong Park* |
| 12 | Week 12 | Ceramics | *Prof. Juhong Park* |
| 13 | Week 13 | Welding | *Prof. Juhong Park* |
| 14 | Week 14 | Individual Consulting | *Prof. Juhong Park* |
| 15 | Week 15 | Final Presentation | *Prof. Juhong Park* |