The Factory for Dreams & Ideas
“Yumekobo”

Masakatsu Matsuishi, Professor
Director of Project Education Center
Kanazawa Institute of Technology
Japan
CONTENTS

- Why and When KIT established Yumekobo?
- Functions of Yumekobo
- Management of Yumekobo
- Improvement Program
- Evaluation of Yumekobo
WHY AND WHEN?

- History: Yumekobo was established in 1993
- Vision:
  Develop self-directed, innovative, and productive engineers by hands-on & experiential learning
- Mission:
  Provide necessary and sufficient technical support, safety control, manufacturing facilities, and engineering workspaces for hands-on and experiential learning activities
STAFF WORKING AT YUMEKOBO

- 14 Full-time technical staff
- 5 Part-time technicians
- 41 Students staff

YUMYKOBO opens 305 days/year, from 8:40 to 21:00
FUNCTIONS OF YUMEKOBO

- Workspaces
- Supply Shop
- Machine Tools
- Yumekobo Projects
- Safety Control
- Technical Courses
- Science Lectures
- Technical Support
TECHNICAL SUPPORT & SAFETY CONTROL

- Technical course
- Safety education & training

Step 1
Safety Instruction
Instruction of hand tools & Explanation of Yumekobo

Step 2
Operation of machines
1. Lathe
2. Milling machine
3. Drilling machine
4. Welding
5. Plate forming
6. Electric wiring
7. Wood working

Step 3
Advanced courses
1. PCB
2. NC milling machine
3. Surface grinding machine
4. Electric & electronic circuit design

@2014 Kanazawa Institute of Technology
TECHNICAL SUPPORT & SAFETY CONTROL

- Technical course
- Safety education & training

- Yumekobo holds the students’ safety paramount

\[
\text{Safety Education & Training} \times \text{Environmental Improvement} = \text{Safety}
\]
YUMEEKOBO SUPPLY SHOP

- Yumekobo sells 1,600 materials
- Do not pursue profit
- Students can save time and expenses
- Honor system (Unattended shop)
WORKSPACES

- Yumekobo #26
- Yumekobo #41
YumeKoBo Projects

- Solar Car
- Formula Car
- Human-powered aircraft
- Robot
- Human-powered aircraft
- Satellite
- RoboCup
- Robot for welfare
- Wind powered generator
- Electric vehicle
- Architecture design
- Solar car
- ET Robot
- Autonomous vehicle
- Unmanned small airplane
- Emergency robot
- Formula car

@2014 Kanazawa Institute of Technology
YUMEKOBO PROJECTS

- Experience full creative process of planning, market survey, design, fabrication, operation, and troubleshooting in teamwork.
- Collect the abilities and knowledge of project members from different departments and academic year into teams.
- Enable students to enhance their technical capability and personal/interpersonal skills by hands-on and experiential learning activities.
## Continuous Program Improvement

<table>
<thead>
<tr>
<th>Evaluation Items</th>
<th>Evaluation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management of Yumekobo</td>
<td>Suggestion box</td>
</tr>
<tr>
<td>Learning outcomes of students</td>
<td>Students’ self-evaluation</td>
</tr>
<tr>
<td>Quality of technical courses</td>
<td>Students’ evaluation</td>
</tr>
<tr>
<td>Safety control</td>
<td>Statistics of accidents</td>
</tr>
</tbody>
</table>
EVALUATION OF YUMEKOBO

- Progress in technical competencies and professional skills
EVALUATION OF YUMEKOBO

- Progress in technical competencies and professional skills

- Do you make full use of your expertise for Yumekobo project activity?
- Are you coping with both Yumekobo project and your classwork?
- Does your learning attitude change toward more enthusiastic one?
EVALUATION OF YUMEKOBO

- Outstanding achievements of Yumekobo projects at domestic & international competitions

@2014 Kanazawa Institute of Technology
EVALUATION OF YUMEKOBO

- Outstanding achievements of Yumekobo projects at domestic & international competitions

Won the championship
Thank you for your attention