

AOL Report Information and Telecommunication Technology Program Assessment (2018)

The Information and Telecommunication Technology Program (ITTP) offers a customized master's and doctoral degree program for government officials, employees of public institutions or senior-level researchers at national research centers working in the IT fields of emerging countries. The program focuses on transferring advanced technologies and business strategies of Korea to the global IT leaders of the next generation. Research areas include IT Technology Management and Policy, Software Engineering, Financial and Accounting Management in the IT industry, Research Design and Methods for Engineers, and Key Technologies for 4th Industrial Revolution.

- Total Number of Courses: 29 (Spring, 2018: 16 / Fall, 2018: 13)
- Number of Graduates: 12 (Master: 8, Ph.D.: 4)
- Total Enrollment: Spring 33/ Fall 27(Mater:15/10, Ph.D.:18/17)
- Sample: 5~9 (15% of 16 = 2.4)
- Assessment Course:

| | | |
|-----------------|-----|--|
| Learning Goal 1 | L11 | ITP 620 Introduction to IT Technology Management/Policy in Korea |
| | L12 | ITP 541 Korean Culture and History II |
| Learning Goal 2 | L21 | ITP 751 Internet Business and Management |
| | L22 | |
| Learning Goal 3 | L31 | ITP 750 ICT Economics and Management |
| | L32 | |
| Learning Goal 4 | L41 | ITP 705 Research Design and Methods for Engineers |
| | L42 | |

Overview of Assessment

| ITTP Assessment: Learning Goal 1 Global Understanding | |
|---|---|
| <i>Our graduates learn to view the world in various aspects</i> | |
| Learning Objectives | Method and Sample |
| (L11) Our graduates understand global business issues and relate current and potential upcoming issues to emerging technology development in their country | Project Evaluation ITP 620 (N=7) |
| (L12) Our graduates have multi-cultural understanding to make new global relations and actively cooperate with various people from all over the world | Presentation Evaluation ITP 541 (N=17) |
| - Professor in charge evaluates students' performances in term project and presentation * 1 (Fails to Meet Expectations) 2 (Meets Expectations) 3 (Exceeds Expectations) | |

| ITTP Assessment: Learning Goal 2 Leadership and Innovation Management | |
|---|--|
| <i>Our graduates use team building and high-performance management behaviors to lead a governmental task successfully in competitive environment</i> | |
| Learning Objectives | Method and Sample |
| (L21) Our graduates have high-performance leadership skill for effectively managing members in their government to deal with organizational challenges | Team Project Evaluation ITP 751 (N=7) |
| (L22) Our graduates have thorough understanding of fundamental theories in innovation studies and are able to understand the mechanism of innovation management in technology and government projects | Assignment Evaluation ITP 751 (N=7) |
| - Professor in charge evaluates students' performances in team project and assignments * 1 (Fails to Meet Expectations) 2 (Meets Expectations) 3 (Exceeds Expectations) | |

| ITTP Assessment: Learning Goal 3 | |
|--|---|
| Domain Expertise in IT Management | |
| <i>Our graduates develop professional knowledge and exhibit professional competencies in IT management</i> | |
| Learning Objectives | Method and Sample |
| (L31) Our graduates build specific knowledge of IT management and understand key issues | Test Evaluation ITP 750 (N=12) |
| (L32) Our graduates apply domain expertise to various business problems in IT management | Assignment Evaluation ITP 750 (N=12) |
| <p>- Professor in charge evaluates students' performance in test and assignments * 1 (Fails to Meet Expectations) 2 (Meets Expectations) 3 (Exceeds Expectations)</p> | |

| ITTP Assessment: Learning Goal 4 | |
|---|--|
| Strategic & Cross-disciplinary Competency | |
| <i>Our graduates are able to strategically analyze business cases and integrate different disciplines in solving business problems in government projects</i> | |
| Learning Objectives | Method and Sample |
| (L41) Our graduates use appropriate analytical techniques to solve business problems and demonstrate the ability of sound business judgment | Assignment Evaluation ITP 705 (N=4) |
| (L42) Our graduates synthesize different discipline areas | Assignment Evaluation ITP 705 (N=4) |
| <p>- Professor in charge evaluates students' performance in assignments * 1 (Fails to Meet Expectations) 2 (Meets Expectations) 3 (Exceeds Expectations)</p> | |

Data Analysis and Results

| Learning Goal 1: Global Understanding Project Evaluation & Presentation Evaluation | | | | | | | |
|---|-------|-------|-------|-------|-------|-------|-------|
| Student Number | L11 | | | | L12 | | |
| | T1 | T2 | T3 | T4 | T1 | T2 | T3 |
| 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 3 | 3 | 3 | 3 | 2 | 2 | 2 |
| 5 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 6 | 2 | 2 | 2 | 2 | 3 | 3 | 3 |
| 7 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 8 | | | | | 3 | 3 | 3 |
| 9 | | | | | 3 | 3 | 3 |
| 10 | | | | | 3 | 3 | 3 |
| 11 | | | | | 3 | 3 | 3 |
| 12 | | | | | 3 | 3 | 3 |
| 13 | | | | | 3 | 3 | 3 |
| 14 | | | | | 2 | 2 | 2 |
| 15 | | | | | 2 | 2 | 2 |
| 16 | | | | | 2 | 2 | 2 |
| 17 | | | | | 2 | 2 | 2 |
| 3 point total | 5 | 5 | 5 | 5 | 10 | 10 | 10 |
| 2 point total | 2 | 2 | 2 | 2 | 7 | 7 | 7 |
| 1 point total | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mean | 2.714 | 2.714 | 2.714 | 2.714 | 2.588 | 2.588 | 2.588 |
| Overall Mean | 2.714 | | | | 2.588 | | |

| Learning Goal 2: Leadership and Innovation Management Team Project Evaluation & Assignment Evaluation | | | | | | | | | |
|--|-------|-------|-------|----|-------|-------|-------|-------|-------|
| Student Number | L21 | | | | | L22 | | | |
| | T1 | T2 | T3 | T4 | T5 | T1 | T2 | T3 | T4 |
| 1 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 2 |
| 2 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 2 |
| 3 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 2 | 2 |
| 4 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 2 |
| 5 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 3 |
| 6 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 7 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 point total | 5 | 5 | 3 | 0 | 4 | 3 | 1 | 1 | 1 |
| 2 point total | 2 | 2 | 4 | 7 | 3 | 4 | 6 | 6 | 6 |
| 1 point total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mean | 2.714 | 2.714 | 2.429 | 2 | 2.571 | 2.429 | 2.143 | 2.143 | 2.143 |
| Overall Mean | 2.486 | | | | | 2.214 | | | |

| Learning Goal 3: Domain Expertise in IT Management Test Evaluation & Assignment Evaluation | | | | |
|---|-------|-------|-------|-------|
| Student Number | L31 | | L32 | |
| | T1 | T2 | T1 | T2 |
| 1 | 2 | 2 | 2 | 1 |
| 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 2 | 3 | 3 |
| 4 | 2 | 3 | 3 | 2 |
| 5 | 2 | 2 | 2 | 1 |
| 6 | 3 | 3 | 3 | 3 |
| 7 | 3 | 2 | 2 | 2 |
| 8 | 2 | 3 | 2 | 2 |
| 9 | 3 | 2 | 3 | 2 |
| 10 | 3 | 3 | 3 | 3 |
| 11 | 3 | 2 | 2 | 2 |
| 12 | 2 | 2 | 2 | 2 |
| 3 point total | 6 | 4 | 5 | 3 |
| 2 point total | 6 | 8 | 7 | 7 |
| 1 point total | 0 | 0 | 0 | 2 |
| Mean | 2.5 | 2.333 | 2.417 | 2.083 |
| Overall Mean | 2.417 | | 2.25 | |

| Learning Goal 4: Strategic & Cross-disciplinary Competency Assignment Evaluation | | | | | | | | | | | | | |
|---|-------|----|-----|------|----|----|-----|-------|----|----|----|-----|------|
| Student Number | L41 | | | | | | | L42 | | | | | |
| | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T1 | T2 | T3 | T4 | T5 | T6 |
| 1 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 |
| 2 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 3 | 3 | 3 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 3 |
| 4 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 3 |
| 3 point total | 4 | 4 | 2 | 3 | 0 | 4 | 2 | 4 | 4 | 4 | 4 | 2 | 3 |
| 2 point total | 0 | 0 | 2 | 1 | 4 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 1 |
| 1 point total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mean | 3 | 3 | 2.5 | 2.75 | 2 | 3 | 2.5 | 3 | 3 | 3 | 3 | 2.5 | 2.75 |
| Overall Mean | 2.679 | | | | | | | 2.875 | | | | | |

Interpretation of Results and Comments

Learning Goal 1 – Objective 1 (L11)

The overall mean for L11 is 2.714, showing that ITTP graduate students can understand global business issues and relate the current and potential upcoming issues to emerging technology development in their countries. For all the traits, around 70% of students exceed expectations but the rest of 30% only meet the expectation. This result implies that there is room to improve overall achievement through caring the students falling behind.

Learning Goal 1 – Objective 2 (L12)

The overall mean for L12 is 2.588, implying that ITTP graduate students have sufficient ability in understanding multi-cultural relations and cooperating with people from other cultural backgrounds. For all criteria, around 59% students exceed the expectations and the other 41% achieve moderate level of performance. Similar to the L11, individualized caring especially for the moderately active students can improve the overall ITTP students' multicultural cooperativeness.

Learning Goal 2 – Objective 1 (L21)

The overall mean for L21 is 2.486, suggesting that the ITTP students possess leadership skills for the organizational challenges. Students received highest score of 2.714 at 'Confidence (Trait 1)' and 'Interpersonal Skill (Trait 2).' The results state that they use both verbal and nonverbal skills for effective communication and influence their colleagues well. However, they received lowest score of 2.00 at 'Ability to focus on goals.' This result shows that students have abilities to keep track at the moderate level but have room to improve managing time or setting priorities.

Learning Goal 2 – Objective 2 (L22)

The overall mean for L22 is 2.214, showing that the ITTP students' performance level on understanding fundamental theories in innovation studies and related government projects is slightly above the moderate level. They received highest score of 2.429 in 'Understanding of Theories (Trait 1)' and 2.143 for other three aspects. Although the scores show that students' research capabilities meet expectation, there is large room for improvement in aspects of research related knowledge and skills compared with other learning objectives.

Learning Goal 3 – Objective 1 (L31)

The overall mean for L31 is 2.417. This shows that the ITTP graduate students' performance level in knowledge of IT management exceeds expectations. Specifically, students scored 2.5 for 'Knowledge on IT Industries (Trait 1)' and 2.333 for 'Understanding of the Key Issues of IT Business Environment.' The results signal that students absorb the knowledge regarding IT industry well.

Learning Goal 3 – Objective 2 (L32)

The overall mean for L32 is 2.25, which implies that the ITTP graduate students have moderately good level of skills in applying domain expertise to various business problems in IT management. In specific, they scored 2.417 at 'Application of IT Industry Knowledge to Specific Problems (Trait 1)' and 2.083 at 'Solution Recommendation Using Structured Approach (Trait 2).' The results show that they performed well in applying knowledge to the problems but have room to improve in making creative solutions for the problems. To enhance students' abilities, further training for data analysis and modeling is needed to improve skills of making solutions.

Learning Goal 4 – Objective 1 (L41)

The overall mean for L41 is 2.679. The result implies that students use analytical techniques to solve business problems well. Specifically, they scored 3.00 out of 3.00 at 'Detecting Problems (Trait 1),' 'Factual Knowledge (Trait 2),' and 'Logical Analysis (Trait 6).' The results show that all the students' performances exceed in identifying problems, accumulating case knowledge regarding business problems, and thinking logically. However, they scored 2.00 in 'Advanced Analytical Techniques (Trait 5).' This result states that students have room to improve in aspect of advanced analytical techniques using data.

Learning Goal 4 – Objective 2 (L42)

The overall mean for L42 is 2.875. It shows that ITTP graduate students' performance is outstanding in synthesizing different discipline areas. They scored 3.00 out of 3.00 in 'Ability to See from Multiple Perspectives (Trait 1),' 'Management with Basic Principles (Trait 2),' 'Knowledge on Disciplines (Trait 3),' and 'Intellectual Ability (Trait 4).' Considering that students received full score in 4 criteria of 6, all students are well trained in understanding multi-disciplinary issues. Such results suggest that the ITTP can design more advanced curriculums to elevate next level of performance.

Overall Comments

Generally, the ITTP graduate students received more than moderate performance level in all aspects of learning objectives. It shows that students have developed satisfactory academic aptitude consistent with the learning goals of the program. Notably, students have remarkable skills in 'Strategic & Cross-Disciplinary Competency (L4).' To enhance the excellence in this area, further courses could be adopted to strengthen the capabilities.

Although students' performance exceeded the expectation in all learning goals and objectives, the results suggest that the graduate students' ability could be more improved when they understand IT-related theories well (L22) and apply domain expertise in various business problems in IT management (L32). For students' intense knowledge acquisition, the ITTP need to focus more on helping students to accumulate and to expand the expertized knowledge in various ways. Such efforts would enrich the education program to train future global IT leaders.