

2019 AOL Report

Information and Telecommunication Technology Program Assessment

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 the 4th Industrial Revolution.

Overall Review

Summary of Learning Goals

Learning Goal 1: Global Understanding - Our graduates learn to view the world in various aspects

Learning Goal 2: Leadership and Innovation Management - Our graduates use team building and high-performance management behaviors to lead a government task successfully in competitive environment

Learning Goal 3: Domain Expertise in IT Management - Our graduates develop professional knowledge and exhibit professional competencies in IT management

Learning Goal 4: Strategic & Cross-disciplinary Competency - Our graduates are able to strategically analyze business cases and integrate different disciplines in solving business problems in government projects

Overall summary of findings and Limitations

In general, most of the ITTP graduate students received more than moderate performance level in all aspects. Students' abilities to learn to view the world in various aspects, use team-building and high-performance management behaviors to lead a governmental task, develop professional knowledge and exhibit professional competencies in IT management, have strategic and cross-disciplinary competency. Notably, students have remarkable skills in 'building specific knowledge of IT management and understanding key issues (L31)'. This observed excellence in this area must receive attention and further courses could be adopted to extend this strength.

Although the students' performance exceeded the expectation in all learning goals and objectives, some aspects need to be improved such as 'understanding of fundamental theories in innovation studies and the mechanism of innovation management in technology and government projects (L22)'. In this regard, more effort is required to improve students' abilities, such as additional courses related to the fundamental theories, mechanism of technology management. Such efforts would enrich the department education to train future global leaders.

- Total number of courses: 25 (Spring: 6, Fall: 8, Spring-Fall: 11)
- Total number of graduates: 10
- Total number of enrollment:
 - Spring - 26 (Master: 13 & Ph.D: 13)
 - Fall - 45 (Master: 25 & Ph.D: 20)
- Sample: more than 7 (Necessary sample: 15% of graduates = 1.5)
- Assessment courses

Learning Goal 1	L11	ITP 620. Introduction to IT Technology Management /Policy in Korea
	L12	ITP 500 Korean conversation
Learning Goal 2	L21	ITP 751 Internet Business and Management
	L22	ITP 751 Internet Business and Management
Learning Goal 3	L31	ITP 755 Digital Convergence Strategy
	L32	ITP 755 Digital Convergence Strategy
Learning Goal 4	L41	ITP 752 Financial and Accounting Management in IT Industry
	L42	ITP 752 Financial and Accounting Management in IT Industry

Overview of Assessment

Information and Telecommunication Technology Program Assessment: Learning Goal 1		
Learning Goal 1 Global Understanding - Our graduates learn to view the world in various aspects		
Learning Objective	Sample	Methods
L11) Our graduates understand global business issues and relate current and potential upcoming issues to emerging technology development in their country	Students enrolled in ITP 620 (N=20)	Project Evaluation
L12) Our graduates have multi-cultural understanding to make new global relations and actively cooperate with various people from all over the world	Students enrolled in ITP 500 (N=23)	Assignment Evaluation
Findings		
<p>Professor in charge evaluates students' performances in term project and assignments * 1 (Fails to Meet Expectations) 2 (Meets Expectations) 3 (Exceeds Expectations)</p> <p>Learning Goal 1 – Objective 1 (L11) The overall mean for L11 is 2.74. All students (20/20) who enrolled the course meet expectations for L11 (No points lower than 2 for all traits in L11). The results imply that ITTP graduate students can understand global business issues and relate current and potential upcoming issues to emerging technology development in their country. The highest average score was 3.00 for 'Ability to understand global issues (Trait1)'. However, 'Ability to apply analysis to global business situation (Trait3)' was the lowest score, 2.20. It shows that students need to improve skills for application of analysis to global business, valid conclusions and good recommendations given.</p> <p>Learning Goal 1 – Objective 2 (L12) The overall mean for L12 is 2.59, 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 69.5% (16/23) of students exceeded the expectations. However, around 13.6% of students failed to meet expectations. Similar to the L11, individualized caring especially for moderately active students can improve the overall ITTP students' multicultural cooperativeness.</p>		

Information and Telecommunication Technology Program Assessment: Learning Goal 2		
Learning Goal 2 Leadership and Innovation Management - Our graduates use team building and high-performance management behaviors to lead a government task successfully in competitive environment		
Learning Objective	Sample	Methods
L21) Our graduates have high-performance leadership skill for effectively managing members in their government to deal with organizational challenges	Students enrolled in ITP 751 (N=6)	Team Project Evaluation
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
Findings		
<p>Professor in charge evaluates students' performances in team project and assignments * 1 (Fails to Meet Expectations) 2 (Meets Expectations) 3 (Exceeds Expectations)</p> <p>Learning Goal 2 – Objective 1 (L21) The overall mean for L21 is 2.47. All students (6/6) meet expectations for L21. (No points lower than 2 for all traits in L21), suggesting that ITTP students possess excellent leadership skills for organizational challenges. Students received a high score of 2.83 at 'Interpersonal skill (Trait 2)', 2.67 at 'Confidence (Trait 1)'. The results state that they use both verbal and nonverbal skills for effective communication and influence their audiences well. However, they received the lowest score of 2.17 at 'Conflict Management and Problem Solving (Trait 3) and 'Multitasking (Trait 5)'. This result shows that they can deal with the conflict with the moderate level but have room to improve to handle the conflicts smoothly which also satisfies everyone.</p> <p>Learning Goal 2 – Objective 2 (L22) The overall mean for L22 is 2.29. All students (6/6) meet expectations for L22. (No points lower than 2 for all traits in L22), 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 the highest score of 2.50 in 'Understanding of Theories (Trait 1)'. Although the scores show that students' skill meets expectation, comparably a larger room to enhance the ability to use 'Proper appropriate research tools (Trait 3)', and 'Knowledge level of current events in one's own research area (Trait 4)'. Both traits were 2.17.</p>		

Information and Telecommunication Technology Program Assessment: Learning Goal 3		
Learning Goal 3 Domain Expertise in IT Management - Our graduates develop professional knowledge and exhibit professional competencies in IT management		
Learning Objective	Sample	Methods
L31) Our graduates build specific knowledge of IT management and understand key issues	Students enrolled in ITP 755 (N=5)	Test Evaluation
L32) Our graduates apply domain expertise to various business problems in IT management		Assignments Evaluation
Findings		
<p>Professor in charge evaluates students' performance in test and assignments * 1 (Fails to Meet Expectations) 2 (Meets Expectations) 3 (Exceeds Expectations)</p> <p>Learning Goal 3 – Objective 1 (L31) The overall mean for L31 is 2.80. All students (5/5) meet expectations for L31. (No points lower than 2 for all traits in L31). Specifically, all students (5/5) scored 3.0 for 'Knowledge on IT Industries (Trait 1)' and average score for 'Understanding of the Key Issues of IT Business Environment (Trait 2)' was 2.6. The results signal that the students absorb the knowledge regarding the IT industry well. This shows that the ITTP graduate students' performance level in knowledge of IT management exceeded expectations.</p> <p>Learning Goal 3 – Objective 2 (L32) The overall mean for L32 is 2.50. All students (5/5) meet expectations for L32. (No points lower than 2 for all traits in L32), which implies that the ITTP graduate students have a moderately good level of skills in applying domain expertise to various business problems in IT management. In specific, they scored 2.60 at 'Application of IT Industry Knowledge to Specific Problems (Trait 1)' and 2.40 at 'Solution Recommendation Using Structured Approach (Trait 2)'. The results show that they showed superior performance in applying knowledge to the problems but relatively have room to improve in making creative solutions for the problems. Additionally, further education for data analysis and modeling would help to improve the skills of making solutions.</p>		

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Assessment: Learning Goal 4		
Learning Goal 4 Strategic & Cross-disciplinary Competency - Our graduates are able to strategically analyze business cases and integrate different disciplines in solving business problems in government projects		
Learning Objective	Sample	Methods
L41) Our graduates use appropriate analytical techniques to solve business problems and demonstrate the ability of sound business judgment	Students enrolled in ITP 752 (N=8)	Assignments Evaluation
L42) Our graduates synthesize different discipline areas		Assignments Evaluation
Findings		
Professor in charge evaluates students' performance in assignments * 1 (Fails to Meet Expectations) 2 (Meets Expectations) 3 (Exceeds Expectations)		
<p>Learning Goal 4 – Objective 1 (L41)</p> <p>The overall mean for L41 is 2.63. All students (8/8) meet expectations for L41. (No points lower than 2 for all traits in L41). The result implies that students use analytical techniques to solve business problems well. Specifically, they scored 2.88 at 'Logical Analysis (Trait 6)', 87.5% (7/8) of students exceed expectations. The average score at 'Detecting Problems (Trait 1)', 'Factual Knowledge (Trait 2)' were also high, 2.75. The results showed that the most of the students' performances exceeded in identifying problems, appropriate applying analysis tools, concepts and technique, and have logically well-organized flow. However, they scored 2.25 in 'Advanced Analytical Techniques (Trait 5)', only 33.3% (2/8) of students exceed expectations. This result states that the students have room to be improved in the aspect of advanced analytical techniques using data.</p>		
<p>Learning Goal 4 – Objective 2 (L42)</p> <p>The overall mean for L42 is 2.71. All students (8/8) meet expectations for L42. (No points lower than 2 for all traits in L42). It shows that ITTP graduate students' performance is outstanding in synthesizing different discipline areas. They scored 2.88 in 'Management with basic principles (Trait 2)' and 2.75 in 'Ability to see from multiple perspectives (Trait 1)', 'Knowledge on disciplines (Trait 3)', 'Intellectual ability (Trait 4)', 'Awareness of inter-relationship (Trait 6)'. All students were well trained in understanding multi-disciplinary issues. Such results recommend that the department is allowed to elevate the expectations for the students' skills or learning so that more advanced curriculums could be designed for higher performances.</p>		

Data Analysis and Results

Assessment Learning Goal 1 (L1): ITP 620_Introduction to IT Technology Management / Policy in Korea(L11) & ITP500 Korean conversation(L12)				
Learning Goal	L1: Global Understanding - Our graduates learn to view the world in various aspects			
	L11:Our graduates understand global business issues and relate current and potential upcoming issues to emerging technology development in their country			
Traits	T1. Ability to understand global issues	T2. Ability to analyze global issues	T3. Ability to apply analysis to global business situation	T4. Ability to understand cultural differences
Students	20	20	20	20
1	3	3	2	3
2	3	3	2	3
3	3	3	3	3
4	3	3	2	3
5	3	3	2	3
6	3	3	2	3
7	3	3	2	2
8	3	3	2	2
9	3	3	2	3
10	3	3	2	3
11	3	3	3	3
12	3	3	3	3
13	3	3	2	3
14	3	3	2	2

15	3	3	2	3
16	3	2	2	3
17	3	3	2	2
18	3	3	3	3
19	3	3	2	3
20	3	3	2	3
# of 3 point	20	19	4	16
# of 2 point	0	1	16	4
# of 1 point	0	0	0	0
Total Score	60	59	44	56
Average	3.000	2.950	2.200	2.800
Total Average	2.738			

Criteria: 1 (Fails to Meet Expectations), 2 (Meet Expectations), 3 (Exceeds Expectations)

Assessment Learning Goal 1 (L1): ITP 620_Introduction to IT Technology Management / Policy in Korea(L11) & ITP500 Korean conversation(L12)			
Learning Goal	L1: Global Understanding - Our graduates learn to view the world in various aspects		
	L12: Our graduates have multi-cultural understanding to make new global relations and actively cooperate with various people from all over the world		
Traits	T1. Understanding of global relations	T2. Global manners	T3. Communication
Students	23	23	23
1	3	3	3
2	3	3	2
3	3	3	3
4	3	3	3
5	3	3	3
6	3	3	3
7	1	1	1
8	3	3	3
9	2	2	2
10	3	3	3
11	2	2	2
12	1	1	1
13	2	2	2
14	3	3	3
15	3	3	3
16	3	3	3
17	3	3	3

18	3	3	3
19	3	3	3
20	3	3	3
21	3	3	3
22	3	3	3
23	1	1	1
# of 3 point	17	17	16
# of 2 point	3	3	4
# of 1 point	3	3	3
Total Score	60	60	59
Average	2.609	2.609	2.565
Total Average	2.594		

Criteria: 1 (Fails to Meet Expectations), 2 (Meet Expectations), 3 (Exceeds Expectations)

Assessment Learning Goal 2 (L2): ITP751_ Internet Business and Management					
Learning Goal	L2: Leadership and Innovation Management - Our graduates use team building and high-performance management behaviors to lead a governmental task successfully in competitive environment				
	L21: Our graduates have high-performance leadership skill for effectively managing members in their government to deal with organizational challenges				
Traits	T1. Confidence	T2. Interpersonal skill	T3. Conflict management and problem solving	T4. Ability to focus on goals	T5. Multitasking
Students	6	6	6	6	6
1	3	3	2	3	2
2	3	3	2	3	3
3	3	3	2	3	2
4	2	3	3	2	2
5	2	2	2	2	2
6	3	3	2	2	2
# of 3 point	4	5	1	3	1
# of 2 point	2	1	5	3	5
# of 1 point	0	0	0	0	0
Total Score	16	17	13	15	13
Average	2.667	2.833	2.167	2.500	2.167
Total Average	2.467				

Criteria: 1 (Fails to Meet Expectations), 2 (Meet Expectations), 3 (Exceeds Expectations)

Assessment Learning Goal 2 (L2): ITP751_ Internet Business and Management				
Learning Goal	L2: Leadership and Innovation Management - Our graduates use team building and high-performance management behaviors to lead a governmental task successfully in competitive environment			
	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			
Traits	T1. 1. Understanding of theories	T2. Applying theories	T3. Properly using appropriate research tools	T4. Knowledge level of current events in one's own research area
Students	6	6	6	6
1	3	3	2	2
2	3	3	3	3
3	3	2	2	2
4	2	2	2	2
5	2	2	2	2
6	2	2	2	2
# of 3 point	3	2	1	1
# of 2 point	3	4	5	5
# of 1 point	0	0	0	0
Total Score	15	14	13	13
Average	2.500	2.333	2.167	2.167
Total Average	2.292			

Criteria: 1 (Fails to Meet Expectations), 2 (Meet Expectations), 3 (Exceeds Expectations)

Assessment Learning Goal 3 (L3): ITP755_Digital Convergence Strategy				
Learning Goal	L3: Domain Expertise in IT Management - Our graduates develop professional knowledge and exhibit professional competencies in IT management			
	L31: Our graduates build specific knowledge of IT management and understand key issues		L32: Our graduates apply domain expertise to various business problems in IT management.	
Traits	T1. Knowledge on IT industries	T2. Understanding of the key issues of IT business environment	T1. Application of IT industry knowledge to specific problems	T2. Solution recommendation using structured approach
Students	5	5	5	5
1	3	3	3	3
2	3	3	3	3
3	3	3	3	2
4	3	2	2	2
5	3	2	2	2
# of 3 point	5	3	3	2
# of 2 point	0	2	2	3
# of 1 point	0	0	0	0
Total Score	15	13	13	12
Average	3.000	2.600	2.600	2.400
Total Average	2.800		2.500	

Criteria: 1 (Fails to Meet Expectations), 2 (Meet Expectations), 3 (Exceeds Expectations)

Assessment Learning Goal 4 (L4): ITP752_Financial and Accounting Management in IT Industry							
Learning Goal	L4: Strategic & Cross-disciplinary Competency - Our graduates are able to strategically analyze business cases and integrate different disciplines in solving business problems in government projects						
	L41: Our graduates use appropriate analytical techniques to solve business problems and demonstrate the ability of sound business judgment.						
Traits	T1. Detecting problems	T2.Factual knowledge	T3.Applying strategic analytical tools	T4. Qualitative and quantitative analysis	T5. Advanced analytical techniques	T6. Logical Analysis	T7. Business judgment
Students	8	8	8	8	8	8	8
1	3	3	3	3	3	3	3
2	2	2	3	3	2	3	2
3	3	3	3	2	2	3	3
4	3	3	3	3	3	3	3
5	3	3	3	3	2	3	2
6	2	2	2	3	2	3	2
7	2	3	2	2	2	2	2
8	3	3	3	2	2	3	3
# of 3 point	5	6	6	5	2	7	4
# of 2 point	3	2	2	3	6	1	4
# of 1 point	0	0	0	0	0	0	0
Total Score	21	22	22	21	18	23	20
Average	2.625	2.750	2.750	2.625	2.250	2.875	2.500
Total Average	2.625						

Criteria: 1 (Fails to Meet Expectations), 2 (Meet Expectations), 3 (Exceeds Expectations)

Assessment Learning Goal 4 (L4): ITP752_Financial and Accounting Management in IT Industry						
Learning Goal	L4: Strategic & Cross-disciplinary Competency - Our graduates are able to strategically analyze business cases and integrate different disciplines in solving business problems in government projects					
	L42. Our graduates synthesize different discipline areas.					
Traits	T1. Ability to see from multiple perspectives	T2. Management with basic principles	T3. Knowledge on disciplines	T4. Intellectual ability	T5. Integration skill	T6. Awareness of inter-relationships
Students	8	8	8	8	8	8
1	2	3	3	2	2	3
2	3	3	3	3	2	3
3	3	3	3	3	3	3
4	3	3	3	3	3	2
5	2	3	2	2	3	2
6	3	2	2	3	2	3
7	3	3	3	3	2	3
8	3	3	3	3	2	3
# of 3 point	6	7	6	6	3	6
# of 2 point	2	1	2	2	5	2
# of 1 point	0	0	0	0	0	0
Total Score	22	23	22	22	19	22
Average	2.750	2.875	2.750	2.750	2.375	2.750
Total Average	2.708					

Criteria: 1 (Fails to Meet Expectations), 2 (Meet Expectations), 3 (Exceeds Expectations)