Ministry of Education, Culture, Sports, Science and Technology Advanced Leading Graduate Program
Global Leader Program for Fiber Renaissance

Third-Party Evaluation
Report
2016 Academic Year

Shinshu University Advanced Leading Graduate Program
Global Leader Program for Fiber Renaissance
Third-Party Evaluation Report
(2016 Academic Year)

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Introduction

The Shinshu University Advanced Leading Graduate Program, Global Leader Program for Fiber Renaissance, which welcomed its first class of eight students in April 2014, began its fourth year in 2016, having grown into a large program of 26 students from eight countries, including Japan. The program took on a more international flavor with the addition of students from Pakistan and Germany for the first time during this academic year, while at the same time the education offered to students by the program also became more diverse. It was a truly dizzying year since the program underwent not only a third-party evaluation, but also an interim evaluation by the Japan Society for the Promotion of Science.

This is our third evaluation of this kind, and I'm confident that we've developed a reasonably robust program as we've worked to enrich and enhance its structures and curriculum with each passing year while taking into accounting corporate, social, and international needs. Nonetheless, each summit we ascend reveals new peaks waiting in the distance. Thanks to a series of new observations, this third-party evaluation brought a reaffirmation of the need to continue to work toward improvements instead of resting on the laurels of past success.

I have no doubt that the ultimate standard by which an educational program can be judged is how well it has performed its mission of sending out numerous talented students into society. The first class has moved through the program, and next year we will at last produce our first graduates. I'm confident that they will turn out to be "global leaders who can create organic linkages among the technologies of different fields and technological and human resources that are scattered across the world and who will be capable of driving new businesses and projects." The thought of the wonderful future that awaits these talented men and women fills us with joy as educators, and we can't wait to see how they fulfill their potential.

In closing, I look forward to harnessing the views offered by participants to the program, and especially the enthusiasm of the textile industry, to better the program. Finally, I'd like to express heartfelt gratitude on behalf of the entire program to the Third-party Evaluation Committee members who spent an enormous amount of time during the coldest season of the year inspecting and evaluating the program.

February 2017
Masayuki Takatera
Program Coordinator, Shinshu University Advanced Leading Graduate Program
Global Leader Program for Fiber Renaissance

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1. Overview of the Third-Party Evaluation Process
1.1. Third-Party Evaluation Committee Schedule and Program

Shinshu University Advanced Leading Graduate Program
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2016 Third-Party Evaluation Committee Meeting Program

Time and date: 9:00 am on Wednesday, January 25, 2017
Location: Meeting Room 2, 7th floor, Shinshu University Faculty of Textile Science and Technology Research Center for Advanced Science and Technology

9:00 am	Greeting by the program director (Professor Makoto Shimosaka, Dean, Faculty of Textile Science and Technology)
9:05 am	Explanation of the purpose of the Third-Party Evaluation Committee (Professor Mikihiko Miura, mentor faculty member)
9:10 am	Explanation of the status of the program (with a focus on improvements in response to past evaluations) (Professor Masayuki Takatera, Program Coordinator) • Admissions status • Program status • Educational content and methods • Educational quality assurance
9:30 am	Question and answer session
9:50 am	Exchange of views between Third-Party Evaluation Committee members and students
10:40 am	Evaluation summary
11:30 am	Review
Following the review	Expression of thanks by the program coordinator (Professor Takatera)

Third-party evaluation topics:
    (1) Program structures
    (2) Admissions
    (3) Educational contents and methods
    (4) Educational quality assurance

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1.2 Meeting Attendees

Third-Party Evaluation Committee Members

In attendance:

Hideshi Ueda	(Vice Chairman and Chairman of the Board of Trustees, Japan Chemical Fibers Association)
Yasuharu Takagi	(Chairperson, Technology and Environmental Measures Committee, Japan Textile Finishers' Association)
Hideo Tsuchiya	(Advisor, All Nippon Nonwovens Association)
Tomio Matsubara	(Director and Chairperson, Educational Activities Committee, Japan Textile Professional Engineer Center)

Not in attendance:

Makoto Sugiyama	(Manager, Lifestyle Industries Division, Manufacturing Industries Bureau, Ministry of Economy, Trade and Industry)
Osamu Tsutsumi	(Member, Technology Committee, Japan Carbon Fiber Manufacturers Association Committee)
Kunio Kimura	(Vice Chairperson, Society of Fiber Science and Technology, Japan)

Shinshu University

Makoto Shimosaka	(Program Director and Dean of the Faculty of Textile Science and Technology)
Masayuki Takatera	(Program Coordinator and Professor)
Hiroaki Ishizawa	(Chairman, Steering Committee, and Professor)
Shigeru Inui	(Chairman, Educational Strategy Committee, and Professor)
Hideaki Morikawa	(Chairman, Industry Partnership Committee, and Professor)
Yasushi Tamada	(Deputy Chairman, Industry Partnership Committee, and Professor)
Kimio Hirabayashi	(Chairman, Student Evaluation Committee, and Professor)
Mikihiko Miura	(Mentor and Specially Appointed Professor)
Tsutomu Ishiwatari	(Mentor and Specially Appointed Professor)
Tsutomu Ikeda	(Office Manager, Faculty of Textile Science and Technology)
Kazunori Inukai	(Assistant to the Office Manager, Faculty of Textile Science and Technology)
Azusa Otsubo	(Administrative Assistant, Research Support and Accounting Group, Faculty of Textile Science and Technology)
Naoko Suguta	(Secretariat)
Akiko Kubota	(Secretariat)

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Students

Tatsuya Ishikawa	(2nd year, Interdisciplinary Graduate School of Science and Technology) (Department of Bioscience and Textile Technology, Functional Fiber Technology Course)
Hiroaki Ishikawa	(1st year, Interdisciplinary Graduate School of Science and Technology) (Department of Bioscience and Textile Technology, Technology of Bioscience Course)
Hanaa Naouma	(2nd year, Graduate School of Science and Technology) (Department of Mechanical Engineering and Robotics)
Tomoki Nagaishi	(2nd year, Graduate School of Science and Technology) (Department of Mechanical Engineering and Robotics)
Nabila Febriani	(1st year, Interdisciplinary Graduate School of Science and Technology) (Department of Textile Science and Technology, Advanced Textiles and Kansei Engineering Division, Kansei Engineering Unit)
Hironori Sugiyama	(1st year, Interdisciplinary Graduate School of Science and Technology) (Department of Textile Science and Technology, Chemistry and Materials Division, Applied Molecular Chemistry Unit)

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1.3 Distributed Materials (List)

1. Third-Party Evaluation Committee Program	1 copy
2. Third-Party Evaluation Committee Attendance Chart	1 copy
3. List of Third-Party Evaluation Committee Attendees	1 copy
4. Program Implementation Status Information	1 copy
5. Third-Party Evaluation Committee Evaluation Sheet	1 copy
5. Leading Program Self-Assessment and Evaluation Sheet	1 copy

2. Committee Members' Evaluations Using the Program Evaluation Sheet

One month prior to the meeting of the Third-Party Evaluation Committee, we mailed each committee member the program's Self-Assessment Evaluation Report and a Program Evaluation Sheet (Individual Version) (see "5. Third-Party Evaluation Materials" below). We then asked committee members who would not be able to attend the meeting to fill in the Program Evaluation Sheet based on the Self-Assessment Evaluation Report. On the day of the Third-Party Evaluation Committee meeting, we also asked committee members to use this Program Evaluation Sheet to evaluate the program based on an explanation of the program's status provided by the program coordinator and program staff members and the exchange of views with students. The results of this process are summarized below. We asked committee members to make their evaluations using a five-grade scale (A: Exceptional; B+: Excellent; B: Normal; B-: Somewhat more effort required; and C: Significantly more effort required), focusing on the period from January 2016, after publication of the previous Self-Assessment and Evaluation Report, to December 2016.

(1) Program structures
The Leading Program's administrative organization is operating in an appropriate manner based on its objectives.

Perspective 1-1
Is the Leading Program's administrative organization operating in an appropriate manner so as to train graduates who reflect its objectives?
Committee members' individual evaluations and comments

A	Healthy progress is being made, including in terms of the administrative organization's relationship with the Third-Party Evaluation Committee.
A	I believe that the administrative organization is oriented toward achieving its objectives (the five principal skills it has identified). Particular areas of excellence are (1) organizational partnerships with the industry and overseas institutions, in contrast to conventional programs, and (2) an ability to adjust its approach in a flexible manner.
B+	The administrative organization continues to improve year by year, and the effects of those efforts are visible. However, there is a need for continued improvement in this area.
A	The administrative organization reflects a multifaceted range of perspectives, and it has undertaken various additional measures.
B+	I believe that the vision outlining the type of graduate that is required in the industry has become clear, and the program's support structures have been enhanced. However, I'd like to see partnerships between industry and academia expanded in order to more effectively identify and address needs, and I believe that it is necessary to hold meetings of the International Evaluation Committee more often, from the perspective of fostering the development of global professionals.
A	The membership of the Leading Program Committee has been reviewed in order to calibrate program structures. In particular, the Industry-Academia Partnership Committee has strengthened its activities, and I commend that improvement.
A	None

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Perspective 1-2
Does the program review its administrative structures in light of social needs?
Committee members' individual evaluations and comments

B+ There remains a need for additional improvement in the program's job placement and internship components.

B+ The program has taken advantage of proposals from the Third-Party Evaluation Committee and visits by members of the Industry-Academia Partnership Committee to absorb corporate needs and make improvements. Going forward, I propose contact with (1) the Japan Textile Federation and with (2) media such as newspapers to confirm social needs, including the needs of companies.

B+ It would be a good idea to strengthen efforts to collect information and to forge connections with society, for example by increasing the number of lectures given by corporate executives.

A The program reviews its administrative structures.

B+ As I noted above, I'd like to see the partnerships linking industry and academia strengthened so that the program can more effectively identify and address needs.

A The program is working seriously to address issues raised by the Third-Party Evaluation Committee, and I'd like to acknowledge that effort.

A None

Perspective 1-3
Have structures been put in place to facilitate international collaboration?
Committee members' individual evaluations and comments

A The program should further improve efforts to accept international students from universities in the U.S. and Europe (including through exchange programs).

A The program has put in place structures to facilitate international collaboration through the Textile Summit, required courses, retreat-style programs, and university training. I'd like to review the linkages and correlation between global collaboration and program results.

B+ Although the program has put in place structures to facilitate collaboration, it seems that personal relationships among professors play too important a role. I think it would be better if the program could pursue international collaboration in a more systematic and strategic manner.

A The program has entered into new comprehensive agreements, and it has put in place structures to hold joint workshops.

B+ Collaboration with overseas companies and institutions is steadily becoming more robust through the Manufacturing and Value Creation Seminars and through Overseas Special Practical Study courses. Going forward, I'd like to ask that evaluations by the International Evaluation Committee be expanded to include the results of that collaboration, as I mentioned above.

A The program has put in place facilities to enable international activities as well as collaborative structures. Concerning the Textile Summit that is planned for 2018, it will be important for the event to serve not only as an opportunity for international education, for example by allowing students to present their research findings and

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exchange information, but also as a venue at which the program can disseminate information about itself and promote itself. I'd like to see the program exhibit greater awareness of collaboration with fiber-related scientific societies.

A   None

(2) Admissions

The program has established a clear series of basic policies concerning selection of students, and applicants are admitted in an appropriate manner based on those policies.

Perspective 2-1

Has the program put in place an admissions policy, and has that policy been publicized and disseminated widely?

Committee members' individual evaluations and comments

A   None

A   The program's admissions policy is clear, and its vision of the ideal applicant has been widely publicized. However, I'd like to ask students whether they were aware of that policy when they applied.

B+   None

A   Are the expressions "other fields" and "other industries" appropriate?

A   The program's admissions policy is clear.

B+   The program's admissions policy has been publicized. There is a need to confirm understanding of the policy through opportunities such as entrance interviews to ensure that overseas applicants taking the entrance examination do not exhibit significant differences relative to their domestic peers in terms of understanding of, or divergence from, the policy's requirements.

A   None

Perspective 2-2

Has the program adopted an appropriate method for accepting applicants based on its admissions policy, and is that method functioning substantively?

Committee members' individual evaluations and comments

A   None

B   Signs of the program's efforts concerning how applicants have been accepted over the last four years are visible. However, in the future, it will be necessary to work to (1) increase the percentage of students from the U.S. and Europe and (2) accept Japanese students from universities other than Shinshu University. In addition, it is necessary to observe how the program publicizes its admissions policy globally.

B+   None

B+   These structures must continue to function beyond the 2019 academic year.

A   A diverse range of students studies in the program, and I believe that students have been admitted in accordance with the admissions policy.

A   I'd like to recognize the program for admitting a good balance of students, including from overseas.

A   None

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Perspective 2-3

Is the program involved with initiatives to verify whether student acceptance is actually being carried out in accordance with the admissions policy, and are the results of those initiatives being used to improve the selection process?

Committee members' individual evaluations and comments

A   None

B+   I recognize the program's efforts to secure Japanese students (by publicizing itself on and off campus, and by allowing students to transfer in). However, there is a need to review the program's roots to determine which groups of students it is meant to serve (Japanese students? Shinshu University students) and which broader group of stakeholders (Japanese companies? foreign companies?).

B+   None

A   There will be significant improvements for the upcoming academic year.

A   If you look at the students the program is planning to admit for the 2017 academic year, I think it's clear how the improvements have worked.

B+   The program can be commended for recruiting significantly more Japanese students as a result of the Leading Program Committee's study of the issue. I'd like to see more information about which improvements proved to be effective, and specific examples of those improvement measures.

A   None

Perspective 2-4

Is the program publicizing itself to recruit talented students?

Committee members' individual evaluations and comments

B+   I saw improvements in how the program promotes itself to students in Japan, for example at Shinshu University. The relationships linking the three partner universities [Shinshu University, University of Fukui, and Kyoto Institute of Technology] should be improved.

A   I recognize the program's efforts to promote itself via a variety of means and the results of those efforts. However, I'd like to see it review its roots (who should be educated, and on behalf of whom) and then undertake additional promotional efforts.

B+   It would be advisable for the program to ramp up its efforts to (1) promote itself at other universities and (2) in Europe on an ongoing basis.

B+   The diversity of the international students the program is attracting has increased. It is also necessary to attract students from other universities in Japan.

B+   Based on the demographics of international students and students who are planning to enroll during the upcoming academic year, the program's promotional activities have been reasonably effective. However, there has been little response from other universities in Japan, and I think that aspect of the program's efforts remains inadequate.

A   The program deserves praise for its active approach to promotional activities in Japan and abroad. Such promotional activities require an enormous amount of effort, but I'd like to see the program continue to put forth "living information" instead of just relying on IoT.

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    B+   I'd like to see the program continue to work to recruit students from other universities.

(3) Educational content and methods

The program's educational content and methods are appropriate in order to train graduates who exhibit the qualities set forth in its objectives, and they are being implemented in an appropriate manner.

Perspective 3-1

Is the Leading Program's curriculum appropriate?

Committee members' individual evaluations and comments

    A   Concerning corporate management, it would be a good idea to create opportunities to hold lectures, and not only from the perspective of intellectual property.

    A   I judge that the program has an extremely dense curriculum in terms of both quality and quantity. This curriculum can be expected to lead directly to the achievement of the program's objectives. In addition, I'd like to hear from students, for example about whether they are satisfied with the curriculum.

    B+   I think the curriculum is appropriate.

    A   The curriculum reflects a wide range of opinions and is appropriate.

    A   By focusing on coursework in the master's program, the curriculum allows students to concentrate primarily on research once they reach the doctoral program. I understand students' concern during their time in the master's program, but I think the approach is a good one in that it facilitates research based on an understanding of the fundamentals. As for preparing students for globalization, it's clear that the program is working to make improvements, for example by offering English-language instruction and overseas training.

    B   The program is to be praised for making ongoing improvements in the curriculum. If students are to work in manufacturing in the future, it will be important for them to have a solid ethical grounding. The curriculum offers instruction in engineering ethics and research ethics, but I would like to see more in the area of environmental ethics.

    A   None

Perspective 3-2

Is the curriculum being implemented in an appropriate manner?

Committee members' individual evaluations and comments

    A   The program has made improvements in response to what was pointed out last year, for example in the area of intellectual property.

    A   There are no issues with the manner in which the curriculum is being implemented. To the extent that the curriculum is characterized by a large amount of content that is quite dense, I'd like to review its relationship with student tracking, satisfaction, results, and the program objectives.

    B+   The curriculum is being implemented in an appropriate manner. It will be necessary to make changes progressively based on a careful review of its content, suitability, and the corporate environment.

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B+ The program needs to tweak the manner in which the curriculum is implemented in the area of internship hosts, particularly companies.

B+ Concerning the question of whether the curriculum is being implemented in an appropriate manner, although the status of curriculum implementation can be determined based on materials, I believe that it is necessary to make a quantitative determination of its effectiveness based on metrics such as TOEIC scores or internship evaluations.

B+ Practical study and internships are important, and I recognize that the program is offering those. As for manufacturing in the future, environmental considerations are essential. The program needs to give students an understanding of companies' environmental activities through opportunities such as company visits.

A None

Perspective 3-3

Does the program provide a system that enables students to achieve program objectives while assessing their own progress on an ongoing basis?
Committee members' individual evaluations and comments

A There have been improvements in areas such as students' evaluation sheets.

A The program has put in place a self-evaluation system and associated support structures for students. However, there are aspects of this system (for example student and mentor feedback) about which I'd like to know more concerning how it actually works.

B+ The system allows objectives to be achieved, but it would be even better if the program could tweak its approach to further boost students' motivation.

B+ Perhaps it is necessary to allow students to choose their own research topics?

B+ I believe that the system with the self-evaluation sheet is functioning, but I wonder if it would be possible to accomplish a more quantitative evaluation based on the program's output, for example in terms of the number of papers published or the number of presentations given at meetings of scientific societies?

A I'd like to recognize that the program has created appropriate opportunities for students to reflect on their performance.

A None

Perspective 3-4

Is the program's educational and research environment appropriate?
Committee members' individual evaluations and comments

A None

A I judge that the program's research environment is superior to that of conventional programs. The important thing is that students are able to take advantage of this environment to achieve the program's objectives (to become global leaders in a fiber renaissance) and that they are working to do so.

B+ The program should (1) enhance the equipment and facilities offered and (2) incorporate more information about partnerships between industry and academia.

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B+   International students are writing their master's thesis as part of their study in their departments. Is that appropriate?

B+   I believe that the program is working to enrich the environment in which the students live, for example. I think that the need for advanced equipment in research will increase as the students continue to move through the program and wonder if the program's approach is adequate in that regard?

A   Students have frequent interviews with their mentors, and the program can also be praised for its efforts in the area of mental care.

A   None

Perspective 3-5

Does the program offer appropriate support structures for students?
Committee members' individual evaluations and comments

B+   Concerning job placement, I'd like to see the entire organization strengthen its approach, rather than leaving it to mentors and faculty members, as it does now.

B+   I'm satisfied with the current support structures. I'm satisfied that the advice of Third-Party Evaluation Committee members is being adopted as appropriate. However, I'm concerned about whether funding will be satisfactory when M1 through D3 reach capacity.

B   None

B+   New measures have been added, and the results have been appropriate.

A   I believe that the program offers appropriate support to students, not only in terms of financial support, but also offerings such as seminars to help them strengthen their English-language proficiency. Going forward, I'd like to see the program continue to offer this kind of support.

A   I'd like to praise the program for its interview program using female mentors and corporate mentors. If there are specific examples of how opinions received from students through such interviews have been applied to support measures, I'd love to learn more about them.

A   None

Perspective 3-6

Do students find the program satisfying?
Committee members' individual evaluations and comments

B+   Student satisfaction is comparatively high, but I'd like to see student feedback applied to the program even more than it is now, and the relationship of departmental programs and faculties with the Leading Program should be more clearly defined.

B+   Based on my impressions from the last two Third-Party Evaluation Committee meetings, I believe that students are satisfied with the program. I expect this level of satisfaction to fuel students' own efforts and help them achieve the program's ambitious objectives.

B+   None

B+   My views are the same as concerning the self-evaluation system.

B+   I wonder if the program could hold meetings for students to exchange views with the
      program coordinator even more often, for example on a quarterly basis?
A   I judge that the program is generally satisfying students by going beyond simply
      guaranteeing the quality of research and education to address their concerns in areas
      such as study.
A   None

(4) Educational quality assurance
The program takes steps to assure the quality of the education it offers in an appropriate manner.

Perspective 4-1
Are the program's degree conferment standards appropriate?
Committee members' individual evaluations and comments
    A   None
    A   The program has formulated completion requirements and rules and published them
          along with associated materials.
    B+   None
    A   None
    B   Although the program has a set of degree conferment standards, it is impossible to
          judge them at the present time since no students have yet graduated from the program.
    B+   I don't think there are any issues with the degree conferment standards. It will be
          necessary to reexamine the standards once the program has actually awarded degrees
          to students.
    B   None

Perspective 4-2
Are the quality assurance standards appropriate when compared to social needs?
Committee members' individual evaluations and comments
    B+   Going forward, it will be important to examine the balance between cultivating
          research skills and meeting social needs with research topics that align with student
          interests.
    B+   The program has been making course corrections while incorporating proposals from
          the Third-Party Evaluation Committee, the International Evaluation Committee, and
          companies. However, it's imperative to ensure that corporate and social needs remain
          aligned
    B+   None
    A   The views of stakeholders are being applied, and the results are appropriate.
    B+   To incorporate a broader range of social needs, I'd like to see the program work to
          offer internships at more companies and to clearly define the qualities that are
          required.
    A   The program's quality assurance standards have been evaluated by third-party entities
          such as the Third-Party Evaluation Committee and the International Evaluation
          Committee, and there are no issues with the manner in which it formulates those
          standards. In addition, the program should be commended for identifying social needs

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through interviews with corporate officials. In particular, it is important for the program's execution to accommodate a broad range of fields without focusing exclusively on the textile field when choosing companies. Since the structure of the textile industry is predicted to change greatly in the coming years, I'd like to see the program work to incorporate views from companies in other industries into its improvement efforts going forward.

Perspective 4-3

Is the content of the qualifying examination appropriate, and is the examination offered in an appropriate manner?

Committee members' individual evaluations and comments

A	None
A	Are international students required to exhibit Japanese language proficiency in order to be eligible to take the qualifying examination?
B+	None
B+	None
A	I believe that the qualifying examination is being offered in an appropriate manner.
B+	The examination is offered in an appropriate manner. I'd like to see the program keep records of how students who fail the first QE are given guidance as they prepare for their second QE, and for that information to be used to improve the program (and the education it offers).
A	None

Perspective 4-4

Is the content of the systematic review appropriate, and is the review administered in an appropriate manner?

Committee members' individual evaluations and comments

A	None
A	I judge that the SR implementation guidelines have been established in an appropriate manner and that the SR is being administered in an appropriate manner.
B+	Improvements clearly have been made in response to what was pointed out during the full review. I expect to see further improvements going forward.
A	None
A	I believe that the systematic review is being administered in an appropriate manner.
B+	The systematic review is being administered in an appropriate manner (it is difficult to distinguish between the QE and SR based solely on the provided materials).
A	None

Perspective 4-5

Are student research findings sufficient?

Committee members' individual evaluations and comments

A	Based on the presentations made by third- and fourth-year students, I judge that the students are obtaining sufficient research findings.

B+   I'm concerned about the difference between the number of papers presented by students from overseas and the number of awards received by Japanese students. Is it fair to conclude from this data that there is a significant and meaningful difference compared to students in conventional master's and doctoral programs?

B+   The program should change the current emphasis on study for first-year students and research during the second and third years.

B+   None

B   Students should be commended for producing papers in a short period of time while maintaining a heavy course load. However, submissions from international students account for the majority of submissions (there may or may not be differences in research field, content, and difficulty). I expect to see Japanese students become more active.

B+   It is difficult to make an evaluation at the present time since students are still moving through the program, but a consideration of information such as paper submissions and awards for presentations to scientific societies suggests that a sufficient level of research findings can be expected.

A   None

Perspective 4-6
Are students making an adequate contribution to their employers?
(Not included in this evaluation)
Committee members' individual evaluations and comments
   -- As described above, the program should strengthen structures related to job placement.
   -- There's a divergence in thinking between international students and Japanese students. Mentors should delve further into individual students' thinking to determine whether they wish to join a company in their own country or in Japan.

(5) Remarks about the exchange of views with students, other
- This time we focused on job placement in our conversations with students, who consider the issue as important as their research thesis. It will be necessary to carefully take individual needs into account when working to place graduates at Japanese companies (in the textile and other fields), including international students.
- The program has adequately identified corporate needs. On the other hand, I think there's a need to review social needs.
- Studying corporate mentors (young doctoral degree-holders), corporate conditions, positions for doctoral degree-holders
- Matching the Leading Program to departmental instruction and need for a master's thesis
- I'm concerned about crowding when the capacity is reached for M1 through D3 (50 students), as well as program continuity.
   1. Growth toward achieving objectives
   2. Concern about the future
   3. Feelings concerning the program in terms of quantity and quality
   4. Current detached existence before admission
   5. Funding (long-term support)

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6. Resolution of student concerns

7. Budget allocation, donations, program selection and concentration

- I feel that there has been steady improvement in areas such as skills, judgment, and motivation on the part of second- through fourth-year students compared to last year, and I think that improvement is the result of the effectiveness of the measures undertaken by the program. I'd like to see the program make additional improvements so that it can train graduates who are able to commercialize fundamental research findings, as described in the admissions policy.

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3. Third-Party Evaluation Committee Meeting Minutes

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Date and time: 9:00 am on Wednesday, January 25, 2017
Location: Meeting Room 2, 7th floor, General Research Building
Attendees: Third Party Evaluation Committee members
Hideshi Ueda (Japan Chemical Fibers Association), Yasuharu Takagi (Japan Textile Finishers' Association), Hideo Tsuchiya (All Nippon Nonwovens Association), Tomio Matsubara (Japan Textile Professional Engineer Center)

Shinshu University
Director Shimosaka
Professor Takatera
Professor Ishizawa
Professor Morikawa
Professor Tamada
Professor Inui
Professor Hirabayashi
Specially Appointed Professor Miura
Specially Appointed Professor Ishiwatari
Office Manager Ikeda
Assistant to the Office Manager Inukai
Assistant Manager Otsubo
Research Assistance Coordinator Suguta
Research Assistance Coordinator Kubota

Not in attendance: Kunio Kimura (Society of Fiber Science and Technology), Makoto Sugiyama (Lifestyle Industries Division, Manufacturing Industries Bureau, Ministry of Economy, Trade and Industry), Osamu Tsutsumi (Japan Chemical Fibers Association Japan Carbon Fiber Manufacturers Association Committee), Professor Okawa

(1) Greeting by the Program Director
Program Director Shimosaka (Dean, Faculty of Textile Science and Technology) welcomed attendees ahead of the convocation of the meeting of the Third-Party Evaluation Committee.

(2) Explanation of the Third-Party Evaluation Committee
Specially Appointed Professor Miura explained the materials that had been distributed to committee members as well as the evaluation process. He also requested their cooperation with the program's plans to record audio at the meeting and to publish a report on the meeting at a future date, which the committee members approved.

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(3) Explanation of the Status of the Program's Implementation

Program Coordinator Takatera offered an explanation of the program's implementation, from its selection to its current status, in line with the self-evaluation report.

(4) Question and Answer Session

A question and answer session about the status of the program's implementation was held. Members of the Third-Party Evaluation Committee repeatedly acknowledged that the program had made improvements to address the issues that were pointed out during the previous year. However, they also expressed their admissions-related wish that the program increase the number of international students admitted form the U.S. and Europe and that it also accept students from other universities. In addition, numerous committee members expressed the view that since the next academic year would see students in their final year of study graduate, the program should develop internship and company visit strategies with an awareness of the importance of job placement.

(5) Exchange of Views between Third-Party Evaluation Committee Members and Students

Since the number of students increased from the previous year, an exchange of views was held with representatives from each year of study, including international students (one or two students from each year of study). Third-Party Evaluation Committee members focused on student expectations and satisfaction as well as job placement in their questions. Students responded with clear statements of their own thinking, and they memorably described their overall level of expectations toward, and satisfaction with, the program as 80% or higher. Concerning job placement, Japanese students described the program's corporate mentors and talks by officials from several companies as useful, highlighting their eagerness to take advantage of the opportunities offered by those connections to broaden their own networks of contacts. International students spoke of their desire to serve as a bridge between their own country and Japan, and it was clear that they saw the need to study Japanese so that they could play that role. Students also recognized the disconnect in their awareness of the treatment of their master's thesis in the departments and programs to which they belong, and they pointed to the need for the program to take measures so that they would not find themselves in a bind as a result.

(6) Evaluation Summary

A summary of the evaluation was presented as described below, with Vice Chairman Hideshi Ueda chairing the proceedings.

Program structures: A
- A: From the standpoint of social needs, what if the program gathered a broad range of information from sources such as the Japan Textile Federation and the media, instead of relying exclusively on companies?
- B+: Executives lectures are useful, and the program should offer more of them. The program has put in place structures to facilitate international partnerships, but it should pursue deeper partnerships in specialized fields. I sense that the program structures are improving, but improvements should continue.

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- A
- A: There's room to incorporate social needs, instead of focusing exclusively on corporate needs.
- Evaluations from three absentee evaluators: A, A, and B+

Admissions: B+
- B+: The program needs to admit more students from the U.S. and Europe. It's also necessary to work harder to admit students from other universities in Japan. I'd like the program to clearly specify the stakeholders on behalf of whom it operates.
- B+: It remains necessary for the program to pursue partnerships with other universities and to promote itself to overseas universities, with a focus on Europe.
- B+: I'm concerned about the program's structures after the 2019 academic year. I sense that the program will encounter a variety of issues if it fails to admit students from other universities in Japan.

B+: The program should act to improve the relationships (in terms of student admissions) linking the three partner universities [Shinshu University, University of Fukui, and Kyoto Institute of Technology] and with other universities.
- Evaluations from three absentee evaluators: A, A, and B+

Educational content and methods: A
- A: I think the university is doing a good job while making various corrections.
- B+: The curriculum is being appropriately administered, but there's probably a need for maintenance in response to changes in corporate wishes and the environment in which the program operates. The program needs to be tweaked to better tap student motivation. Based on student presentations, I inferred a need to make appropriate improvements in equipment and facilities from the standpoint of research and partnerships among industry, academia, and government.
- B+: It is necessary to choose companies to host internships while listening to students' wishes in areas such as job placement. I sense that there is some operation at cross-purposes internally at the university, for example regarding master's thesis assignments. (I asked about this during the exchange of views with students.)
- The program should hold company lectures. I can see improvement in areas that were pointed out last year, for example intellectual property. I'd like to see the faculty strengthen its structures regarding job placement, instead of leaving that to mentors and responsible faculty members. Departments and the Leading Program should organize and standardize their requirements (master's theses, etc.) and ensure those decisions are followed internally.
- Evaluations from three absentee evaluators: A, B+, and B+

Educational quality assurance: A
- A: The program does a good job responding to the various things evaluation groups point out. It would be even better if it listened to industry groups. International students produce a large number of presented papers, while Japanese students produce fewer. On the other hand, Japanese students win more awards. How is the program going to address these

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imbalances?
- B+: The program's efforts to improve areas where issues have been pointed out have been effective. Continued study will be necessary in order to determine whether sufficient research findings are being produced.
- A: QE content is difficult to understand. The question of whether research findings are sufficient will have to be addressed in the future.
- A: Looking at students' research presentations, the importance of balancing selection of research topics that meet social needs with cultivation of research skills is clear. It seems that students are accomplishing a variety of research that meets social needs, but I question whether it is too shallow. Their research needs more depth.
- Evaluations from three absentee evaluators: B+, B, B

Overall evaluation: A
- It's clear that the program is working to make improvements in response to issues that have been pointed out by outside entities, including industry needs.
- Based on presentations and other sources, there has been improvement from the previous academic year in areas such as students' approach to research and their English language proficiency.
- It's clear that students are growing in areas such as presentation skills, English language proficiency, and motivation. Students asked each other questions during the annual end-of-year presentation, a development that would have been unthinkable last year.
- The program also deserves high praise for its active efforts outside of research, which were validated when it was chosen as a candidate to host the nationwide Student Meeting of Leading Graduate Schools.
- I'd like to see the program strengthen its structures in areas such as job placement activities and internships. Japanese students and international students demand different approaches, and that makes it necessary for the program to offer a flexible, fine-grained approach. In addition, I think it's necessary to provide an opportunity for students to communicate not with the host company's human resources person, but rather with a doctoral degree-holder in about the third year of his or her career just before the student starts an internship. Furthermore, it would be useful to seek feedback from more experienced counterparts (programs chosen at other universities). Perhaps the program could create opportunities for soliciting advice from students just undertaking job placement activities at other Leading Programs.
- I think company visits to date have yielded only tepid results. I think it would be more effective to have stakeholder associations play the role of facilitator. What if the program held joint information sessions in booths with the participation of member companies? Interested students could participate, including international students (not limited to a particular year of study).

(7) Review of the Evaluation
Vice-chairman Ueda notified Shinshu University of the committee's overall evaluation of "A."

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(8) Expression of Thanks from the Program Coordinator
Program Coordinator Takatera expressed his thanks to the committee members in order to close the meeting.

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4. Response to the Third-Party Evaluation

Response to the 2016 Third-Party Evaluation

Masayuki Takatera
Program Coordinator

Since the creation of the program, we've worked to improve it based on observations and suggestions from the Third-Party Evaluation Committee. I expect that hard work will be reflected in the intermediate evaluation results from the Japan Society for the Promotion of Science, which are scheduled to be announced in March. This year, too, we received various observations and advice from the members of the Third-Party Evaluation Committee, and we plan to take our improvement efforts to the next level in response, as described below.

(1) Program structures
Committee members praised our program structures, noting, "It's clear that the program is working to make improvements in response to issues that have been pointed out by outside entities, including industry needs." However, they also proposed further enhancing partnership with outside organizations, for example by expanding collaboration between industry and academia, including with textile groups. Other ideas included holding more lectures by corporate executives and International Evaluation Committee meetings.

Of those proposals, I plan to search for specific approaches that we can implement to strengthen partnerships with outside organizations by asking stakeholders for their cooperation. Concerning the proposal to hold more lectures by corporate executives, since it would be difficult to add new elements to a curriculum that is already very dense, we plan to increase the number of talks by corporate executives offered as part of classes on intellectual property management and to encourage program students to participate in other talks by corporate executives, for example those held by the Faculty of Textile Science and Technology's Asama Research Extension Center (AREC).

In addition, since it would be difficult to increase the number of meetings of the International Evaluation Committee under current program structures, we will work to accomplish the same thing through different means, for example by soliciting the views of foreign professors when they visit campus to give lectures.

(2) Admissions
Even as committee members recognized improvements made since last year, for example the admission of a good balance of students, including from overseas, they also had some harsh observations for the program, including one that echoed comments from last year: "The program needs to admit more students from the U.S. and Europe. It's also necessary to work harder to admit students from other universities in Japan." They also offered some new ideas by pointing to the need to get back to the program's roots and determine which groups of students it is meant to serve so that it can promote itself accordingly and to draw on the relationships linking the three partner

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universities [Shinshu University, University of Fukui, and Kyoto Institute of Technology].

In terms of recruiting students for admission during the 2018 academic year, the situation is likely to become even more challenging since we will only be able to offer financial aid for the first two of the program's five years. Consequently, we intend to focus our explanations on the quality of the education that the program offers, for example by shifting our promotional message from financial aid to the appeal of the program's curriculum. Furthermore, in addition to asking universities in Europe and the U.S. to recommend students, we will hold more information sessions at other universities in Japan, for example the National Institute of Technology.

Concerning the advice we received to review which groups of students the program is intended to serve, we plan to continue the stance we've employed to date, which consists of educating talented students by promoting the program to students from all countries worldwide, with a focus on Japanese students, in order to foster the development of professionals who will be able to pursue careers at companies and institutions worldwide that have some sort of relationship with Japan. Concerning the advice to draw on the relationships linking the three partner universities, I believe that this observation concerns the manner in which we have been clearly differentiating the Leading Program from the three partner universities' collaborative program, which in turn reflects the pledge we made in our application to the Ministry of Education, Culture, Sports, Science and Technology, specifically that the Leading Program would be completely different than, and independent from, that collaborative program in terms of its administration. Although we need to continue to maintain that clear separation between the Leading Program and the three partner universities' collaborative program until subsidies from the Ministry for the former end in March 2020, combining the two programs once those subsidies have ended may be an option.

(3) Educational content and methods
Although committee members pointed to improvements in the areas that were pointed out last year, for example intellectual property, at the same time, they cited the need to strengthen the structures that offer assistance to students as they look for jobs, for example by strengthening structures in areas such as job placement activities and internships, offering fine-grained job placement support to international students, and creating opportunities for interns to talk with doctoral degree-holders who are in the third year of their careers. Another committee member suggested that it would be effective to have stakeholder associations play the role of facilitator. Yet another pointed to the need to address student confusion due to differences in the requirements imposed by the departments to which students belong and the Leading Program.

Concerning the strengthening of job placement activities and internships, I'm planning to actively ask stakeholders to serve as bridges to companies in line with the committee's proposal since the first group of students will be graduating in two years. In addition to enhancing the program's own Japanese language education in order to improve international students' Japanese language proficiency, which will be necessary if they intend to work in Japan, we intend to offer support by holding internship matchmaking sessions and job placement exchange events with Japanese companies.

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Concerning the idea of having students speak with doctoral degree-holders in the third year of their careers, I hope to have stakeholders introduce people who are currently working in their companies as a way to find opportunities for program students to talk to such professionals.

Concerning student confusion arising from differences in the requirements imposed by the departments to which they belong and the Leading Program, administrators are working to resolve those concerns by assessing the situation. In particular, there is a significant amount of confusion about issues involving master's degree conferment. Although the program rules state that students who pass a qualitative examination in the form of the SR (requiring submission of a research activity plan and review of research and then an examination by the SR screening committee) will receive a master's degree, some departments also require Leading Program students to complete the same process as normal master's students (requiring submission of a master's thesis and then participation in a hearing on the thesis). Going forward, we will work to resolve student confusion more effectively.

(4) Educational quality assurance

Although committee members praised the program for incorporating suggestions from various evaluation groups, they also pointed to the need to stimulate Japanese students, who are producing fewer presented papers than their international counterparts, and to the need to articulate the qualities required in order to incorporate a broad range of social needs. In addition, the committee highlighted the need for a fine-grained approach to job placement for international students, pointing to the need for mentors to talk about job placement with international students based on each individual student's thinking (this echoed observations received in the "Educational Content and Methods" portion of the evaluation). In addition, one member noted that it is difficult to differentiate between the QE and SR.

Concerning the observation that Japanese students produce fewer papers, I'd like to reduce any discrepancy in the number of papers produced based on students' nationality by tweaking the program's approach so that all students can dedicate as much time as possible to research. However, in many cases the difference in the number of papers produced can be traced back to the specific field and lab in which the student is conducting research. Concerning the observation about articulating the required qualities, I hope to utilize partnerships with companies to better articulate those qualities by further articulating social needs.

Concerning conversations between mentors and international students, we plan to work to ensure mentors can better grasp international students' thinking during mentor interviews. Furthermore, concerning differentiation between the QE and SR, the administration will work to better clarify the difference for outside entities by communicating the role of the QE as what would be the entrance examination for a conventional doctoral program and the SR as the master's thesis screening.

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5. Third-Party Evaluation Materials
5.1 Program Evaluation Sheet (Individual Version)

Shinshu University Advanced Leading Graduate Program
2016 Academic Year Third-Party Evaluation Committee
Program Evaluation Sheet (Individual Version)
Target dates: January 2016 to December 2016

Overall Evaluation
[**A** / **B+** / **B** / **B-** / **C**]
A: Exceptional   B+: Excellent B: Normal
B-: Somewhat more effort required   C: Significantly more effort required

Evaluation items

1. Program structures
[**A** / **B+** / **B** / **B-** / **C**]

The Leading Program's administrative organization is operating in an appropriate manner based on its objectives.

Perspective 1-1
Is the Leading Program's administrative organization operating in an appropriate manner so as to train graduates who reflect its objectives?
[A / B+ / B / B- / C]

Comments

Perspective 1-2
Does the program review its administrative structures in light of social needs?
[A / B+ / B / B- / C]

Comments

Perspective 1-3

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Have structures been put in place to facilitate international collaboration?

[A / B+ / B / B- / C]

Comments

2. Admissions

[A / B+ / B / B- / C]

The program has established a clear series of basic policies concerning selection of students, and applicants are admitted in an appropriate manner based on those policies.

Perspective 2-1

Has the program put in place an admissions policy, and has that policy been publicized and disseminated widely?

[A / B+ / B / B- / C]

Comments

Perspective 2-2

Has the program adopted an appropriate method for accepting applicants based on its admissions policy, and is that method functioning substantively?

[A / B+ / B / B- / C]

Comments

Perspective 2-3

Is the program involved with initiatives to verify whether student acceptance is actually being carried out in accordance with the admissions policy, and are the results of those initiatives being used to improve the selection process?

[A / B+ / B / B- / C]

Comments

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Perspective 2-4
Is the program publicizing itself to recruit talented students?

[A / B+ / B / B- / C]

Comments

3. Educational content and methods

[A / B+ / B / B- / C]

The program's educational content and methods are appropriate in order to train graduates who exhibit the qualities set forth in its objectives, and they are being implemented in an appropriate manner.

Perspective 3-1
Is the Leading Program's curriculum appropriate?

[A / B+ / B / B- / C]

Comments

Perspective 3-2
Is the curriculum being implemented in an appropriate manner?

[A / B+ / B / B- / C]

Comments

Perspective 3-3
Does the program provide a system that enables students to achieve program objectives while assessing their own progress on an ongoing basis?

[A / B+ / B / B- / C]

Comments

Perspective 3-4

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Is the program's educational and research environment appropriate?

[A / B+ / B / B- / C]

Comments

Perspective 3-5
Does the program offer appropriate support structures for students?

[A / B+ / B / B- / C]

Comments

Perspective 3-6
Do students find the program satisfying?

[A / B+ / B / B- / C]

Comments

4. Educational quality assurance
[A / B+ / B / B- / C]

The program takes steps to assure the quality of the education it offers in an appropriate manner.

Perspective 4-1
Are the program's degree conferment standards appropriate?

[A / B+ / B / B- / C]

Comments

Perspective 4-2
Are the quality assurance standards appropriate when compared to social needs?

[A / B+ / B / B- / C]

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Comments

Perspective 4-3

Is the content of the qualifying examination appropriate, and is the examination offered in an appropriate manner?

[A / B+ / B / B- / C]

Comments

Perspective 4-4

Is the content of the systematic review appropriate, and is the review offered in an appropriate manner?

[A / B+ / B / B- / C]

Comments

Perspective 4-5

Are student research findings sufficient?

[A / B+ / B / B- / C]

Comments

Perspective 4-6

Are students making an adequate contribution to their employers?
(Not included in this evaluation)

Comments

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Remarks about the exchange of views with students, other

Comments

Form completed by: _____

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5.2 Program Evaluation Sheet (Overall Version)

Shinshu University Advanced Leading Graduate Program 2015 Academic Year Third-Party Evaluation Committee Program Evaluation Sheet (Overall Version)
Target dates: January 2015 to December 2015

Overall evaluation: [A   /   B+   /   B   /   B-   /   C]

Evaluation items
1. Program structures: [A   /   B+   /   B   /   B-   /   C]
2. Admissions: [A   /   B+   /   B   /   B-   /   C]
3. Educational content and methods: [A   /   B+   /   B   /   B-   /   C]
4. Educational quality assurance: [A   /   B+   /   B   /   B-   /   C]

General observations on program:

January 26, 2016

Evaluator
Name: _____ [SEAL]