

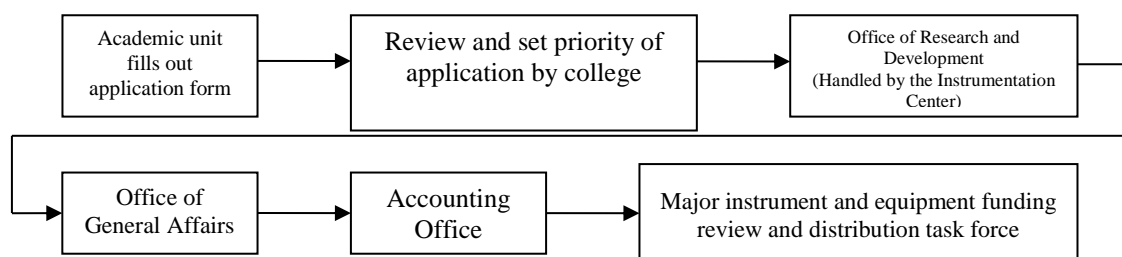
National Taiwan Normal University Major Instrument and Equipment Funding Application and Review Plan

Passed during NTNU's 90th Academic Fund Committee Meeting on December 16, 2015
 Passed during NTNU's 92nd Academic Fund Committee Meeting on May 24, 2016
 Passed during NTNU's 96th Academic Fund Committee Meeting on April 13, 2017
 Passed during NTNU's 101st Academic Fund Committee Meeting on May 8, 2018
 Passed during NTNU's 103rd Academic Fund Committee Meeting on October 5, 2018
 Passed during NTNU's 107th Academic Fund Committee Meeting on March 22, 2019
 Passed during NTNU's 111th Academic Fund Committee Meeting on October 25, 2019
 Passed during NTNU's 114th Academic Fund Committee Meeting on April 30, 2020
 Passed during NTNU's 119th Academic Fund Committee Meeting on April 26, 2021

- I. Purpose: The Plan was formulated to carefully and reasonably allocate funds for major instruments and equipment this year, elevate the level of teaching and research at National Taiwan Normal University (NTNU), meanwhile enhance teaching and service functions, and increase benefits from resource utilization.
- II. Basis: Implemented in accordance with the resolution adopted by the major instrument and equipment funding review and distribution task force (hereinafter referred to as the "Task Force") of NTNU.
- III. Operating method: Implemented in three phases, namely application, review, and procurement.

(I) Application phase

1. Eligibility: Academic units on NTNU campus (colleges, departments, institutes, and undergraduate programs; centers at each level are excluded).
2. Number of items: Application limited to one major instrument.
3. Scope of application: Major instrument, database, or book set for research or teaching. Construction or repair items may not be included; the items for which subsidies are applied may not have the same specifications or usage as instruments currently managed by the NTNU Instrumentation Center (hereinafter referred to as the "Center".)
4. Application Period: November 1-30 every year.
5. Application procedure:



6. Application documents: Application form, related forms [applicant information form (Attachment 1), management and usage benefits report (Attachment 2, if applicable), external scholar and expert recommendation form (Attachment 3), and review scorecards (Attachment 4-6)], quotations from three companies

(except for when meeting the Subparagraph 2, paragraph 1, Article 22 of the Government Procurement Act, where the subject of a procurement is an exclusive right or a sole source product or supply, which can be supplied only by a particular supplier, relevant proofs and quotations shall be provided.); applications will not be accepted if documents are incomplete.

7. Funding limit: From NT\$5million up to NT\$15million.
8. Requirements on matching funds: For the reasonable distribution of limited resources, applicants must raise at least 15% of the final approved amount as matching funds, which increases the overall benefits of fund planning.
9. Spatial requirements: When applying to purchase instruments, suitable space, management, and maintenance plans are required for instrument installation, testing services, repair, and warranty.
10. Applicants for major instrument subsidies from NTNU must fill out an Application Form for Shared Service Inclusion to join the Center's service program, and adopt the instrument reservation system of NTNU to increase instrument utilization.
11. All applications from departments/institutes for major instruments must go through college review procedures. The applications are listed in the order of their priority by the college based on the amount, specifications, importance of the instrument, and cross-departmental sharing, and the list is recommended to the Task Force for review.
12. For instruments subsidized by the Ministry of Science and Technology (MOST) and used in the Center's service program, in case of insufficient matching funds, the insufficient amount after deducting the applicant's self-raised funds will be covered by the major instrument and equipment funds.

(II) Review phase

1. Review period: About three months starting from the following day of the application deadline.
2. Review criteria and distribution ratio:
 - ※Review by external committee members (position outside NTNU) (50%)

The purpose, necessity and expected benefits for major instrument and equipment funding application. (100 points)

- ※Review by internal committee members (position within NTNU) (50%)

(1) Performance and applications over past years: (40%)

- ① The applicant's performance in MOST Projects and industry-academia collaboration projects with government agencies and non-government organizations in the past 3 years. (50 points)

- (a) The applicant's performance in MOST Projects (excluding industry-academia collaboration projects with the MOST) in the past 3 years (average number of projects and amount per full-time faculty member,

respectively).

(b)The applicant’s performance in industry-academia collaboration projects with government agencies (MOST, Ministry of Economic Affairs, Council of Agriculture, and so on) in the past 3 years (average number of projects and amount per full-time faculty member, respectively).

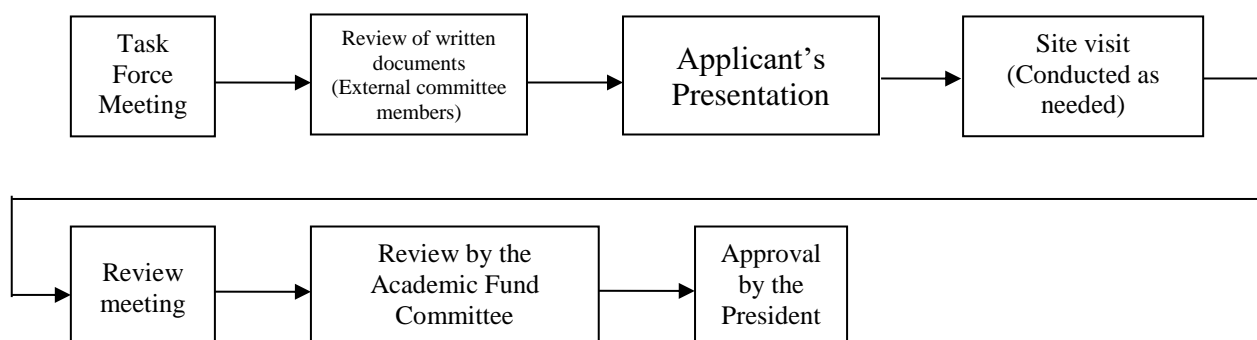
(c)The applicant’s performance in industry-academia collaboration projects with non-government organizations in the past 3 years (average number of projects and amount per full-time faculty member, respectively).

② The applicant’s major instrument funding management and usage benefits in the past 3 years. (40 points)

③ The scheme for matching funds. (10 points)(2)The applicant's presentation score (10%): The applicant shall give an oral presentation on the project. (100 points)

3. Scoring explanation: Scorecards are shown in Attachments 4-6 (Scorecard I, Scorecard II, and Overall Scorecard, respectively).

4. Review procedures:



(1)Task Force Meeting: Staff members organize data and make review schedules during the meeting.

(2)Review of written documents: Application documents are sent to external scholars and experts in related fields for review.

(3)Presentation or site visit: The applicant will be invited to give an oral presentation on the project, so as to understand the urgency of the instrument being applied for. Depending on the situation, the Task Force may visit the applicant to understand the execution of major instrument and equipment funds over the past 3 years.

(4)Review meeting: Based on opinions from the review of written documents (presentation or site visit results will be referenced when necessary), a Task Force review meeting will be convened.

(5)Review by the Academic Fund Committee: Review results will be submitted to the Academic Fund Committee.

(6) Approval by the President: Resolutions of the Academic Fund Committee will be submitted to the president for approval to complete the review process.

5. Announcement of review results: Announced before April 30 each year and a notice is sent to applicants.

(III) Procurement phase

1. Applicants approved for subsidies may not change the equipment items they applied for. If the change is necessary due to force majeure, the applicant must specify the reason for change and give a presentation in person during a Task Force Meeting for review by the Task Force. The application will be rejected by the Office of Research and Development if the change is not due to force majeure.
2. Procurement may only be carried out after gaining approval from the Office of Research and Development, and shall be completed in accordance with the Government Procurement Act, NTNU's delegation of authority for procurements, and other NTNU regulations.
3. Any remaining funds of subsidized units after completing procurement must be returned to the Academic Fund. Case closure and payment procedures must be completed before November 30 each year, and the funds may not be retained.

IV. Personnel assignment:

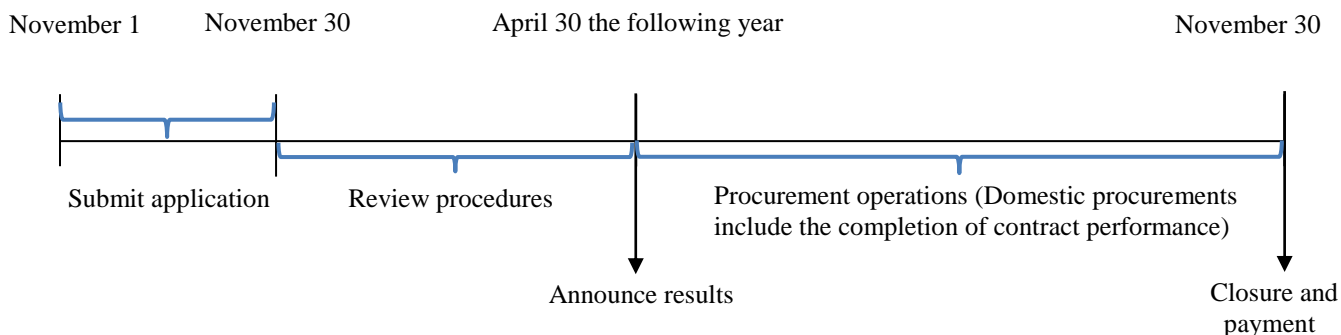
(I) Task Force members: Members of the Academic Fund Committee who do not hold administrative positions serve as Task Force members, and all members of the Academic Fund Committee elect one Task Force member as the convener.

(II) External scholars and experts (position outside NTNU): The project applicant provides a list of 4 recommended external scholars and experts, and the Task Force's staff unit recommends several suitable external scholars and experts, who are appointed after being approved in a Task Force meeting.

(III) Staff members: Personnel of the Instrumentation Center, Office of Research and Development serve as staff members.

V. Budget: All administrative expenses are paid by the Office of Research and Development.

VI. Schedule:



- VII. Any matters that are not addressed in the Plan shall be governed by relevant regulations.
- VIII. The Plan has been reviewed during a Task Force Meeting and implemented with the approval of the President. The same applies to all subsequent amendments.

National Taiwan Normal University Major Instrument and Equipment Funding Application Form for 20XX

Name of instrument or equipment	
Category	<input type="checkbox"/> Life Sciences <input type="checkbox"/> Science and Engineering <input type="checkbox"/> Information Technology <input type="checkbox"/> Science Education, Education <input type="checkbox"/> Humanities, Social Sciences <input type="checkbox"/> Arts <input type="checkbox"/> Management <input type="checkbox"/> Physical Education <input type="checkbox"/> Others
Quantity	
Total amount	(Please specify source of funds)
Amount	NT\$_____ (Please use Arabic numerals)
Reasons for Applying	
Description of project contents	
Equipment description and market survey	
Purpose and necessity of application for funds and expected benefits	
Cross-departmental integration and sharing	
Matching funds and overall funding of applicant	※ Applicants must raise at least 15% of the final approved amount as matching funds
Spatial planning, management, and maintenance by applicant	
Actual benefits brought by the instrument to the Instrumentation Center of NTNU	
Attachment	
Organizing College and Department/Institute: Co-organizing College and Department/Institute:	
Host:	Title:
Handling Officer:	Title:
	Tel:
	Tel:

Verifier	Head of College	Office of Research and Development Division of Academic Research Promotion and Coordination, <u>Cooperative Project Division)</u>	Office of General Affairs	Accounting Office

- Note: 1. Application documents will be sent to external scholars and experts in related fields for review. Please handle any parts that involve confidential information where appropriate.
2. If this table has insufficient space, extend it accordingly or use attachments.
3. Please submit applications by college; applications missing any seals will not be accepted.

National Taiwan Normal University Explanation on Filling Out Application Forms for Purchasing Major Instruments and Equipment for 20XX

Name of instrument or equipment	Please fill in the major instrument or equipment 、 database, or large sets of books to be acquired.
Category	Please select the right category of the equipment to be acquired.
Quantity	Please list detailed items, priority, and required quantity and amount (an estimate may be used) of detailed items of the equipment to be purchased. Please provide an explanation if the equipment cannot be divided into detailed items. Due to funding limitations, if funds are insufficient to purchase the equipment after receiving subsidies, the subsidy may be withdrawn.
Amount (Please specify source of funds)	Please fill in the amount of subsidy for which you are applying to NTNU
Reasons for Applying	Please describe the facts of the case.
Description of project contents	<p>1. Large-scale integrated research projects: Please attach the proposal and implementation summary for large-scale integrated research projects. If the equipment will be used for a new large-scale research project, please prepare a proposal using the following outline:</p> <p>(1) Provisional project name.</p> <p>(2) Overview of project (must contain specific contents).</p> <p>(3) Principal investigator, colleges and departments participating in the project, and main researchers.</p> <p>(4) Equipment functions and use plan.</p> <p>2. Other projects that will use the equipment: Please list one new research project (not the current project) that will be implemented after the equipment is purchased, provide the project summary, key points and importance of the equipment, principal investigator (please provide signature and seal), and department. [Please design the format]</p>
Equipment description and market survey	Please specify where the equipment is manufactured, the manufacturer, brand and model (if there are multiple options, please list them by priority), attach an estimate and specifications and functions (such as sensitivity, precision, etc.), and other information on important characteristics, important attachments, and warranty and repair.
Purpose and necessity of application for funds and expected benefits	<p>1. Please describe the distribution and use of the equipment in Taiwan and overseas, the main research purpose that cannot be achieved by current equipment but can be achieved by the equipment to be purchased, the necessity and urgency of the equipment to the current research project or new research projects being planned, and provide a detailed reference list.</p> <p>2. Please list work items that are expected to be completed within 5 years.</p> <p>3. Expected contributions to academic theory and applications.</p> <p>4. Training for personnel participating in the project.</p>
Cross-departmental integration and sharing	Please give examples of supporting teaching and research of teachers and students in NTNU, service performance for other units of NTNU, and other cross-departmental integration and sharing.
Matching funds and overall funding of applicant	Please describe other sources of funding (funds raised by the department, external subsidies) that can be used to purchase the equipment when a lower amount is approved; provide detailed descriptions for each source of funding and attach supporting materials. Applicants must raise at least 15% of the “final approved amount” as matching funds

	[※Required]
Spatial planning, management, and maintenance by applicant	Please provide a detailed description of the space where the equipment will be installed and used, the name, title, and unit of the responsible person, provision of administrators (number of individuals and competency requirements), estimated maintenance expenses and source, and regulations on use, management, and fee collection.
Actual benefits brought by the instrument to the Instrumentation Center of NTNU	Please describe the benefits of the equipment to the Instrumentation Center of NTNU, such as expected economic benefits of the instrument and improved image of the Center.
Attachment	<ol style="list-style-type: none"> 1. Applicant's personal information form. (Appendix 1) 2. Management and usage benefits report. (Appendix 2, if applicable) 3. External scholar and expert recommendations. (Appendix 3) 4. Scorecards. (Appendix 4-6) 5. Meeting minutes of the applicant relevant to the application. 6. Quotations from three companies (except for when meeting the Subparagraph 2, paragraph 1, Article 22 of the Government Procurement Act, where the subject of a procurement is an exclusive right or a sole source product or supply, which can be supplied only by a particular supplier.)

Appendix Table 1**National Taiwan Normal University Major Instrument and Equipment Funding Applicant's Personal Information Form in 20XX**

Organizing College and Department/Institute Co-organizing College and Department/Institute:

MOST Projects (excluding industry-academia collaboration projects with the MOST)					
Year	Project count	Full-time faculty members Number of individuals	Average number of projects per person (Calculate to the second decimal place)	Total amount	Average amount per person (Round to whole number)
2016	project(s)	individual(s)	project/individual	NTD	NTD/individual
2017	project(s)	individual(s)	project/individual	NTD	NTD/individual
2018	project(s)	individual(s)	project/individual	NTD	NTD/individual
Historic average	project(s)	individual(s)	project/individual	NTD	NTD/individual
Industry-academia collaboration projects with government agencies (MOST, Ministry of Economic Affairs, Council of Agriculture, others)					
Year	Project count	Full-time faculty members Number of individuals	Average number of projects per person (Calculate to the second decimal place)	Total amount	Average amount per person (Round to whole number)
2016	project(s)	individual(s)	project/individual	NTD	NTD/individual
2017	project(s)	individual(s)	project/individual	NTD	NTD/individual
2018	project(s)	individual(s)	project/individual	NTD	NTD/individual
Historic average	project(s)	individual(s)	project/individual	NTD	NTD/individual
Industry-academia collaboration projects with non-government organizations					
Year	Project count	Full-time faculty members Number of individuals	Average number of projects per person (Calculate to the second decimal place)	Total amount	Average amount per person (Round to whole number)
2016	project(s)	individual(s)	project/individual	NTD	NTD/individual
2017	project(s)	individual(s)	project/individual	NTD	NTD/individual
2018	project(s)	individual(s)	project/individual	NTD	NTD/individual
Historic average	project(s)	individual(s)	project/individual	NTD	NTD/individual

Note:

1. The application unit should fill in the number of full-time teachers of each academic year.
2. Columns other than that of the number of full-time teachers will be filled in by the Office of Research and Development.

Principal investigator Co-principal investigator

I. Basic information

Signature: _____

ID Number										Date completed: / /							
Chinese Name					English Name					(Last Name) (First Name) (Middle Name)							
Nationality				Gender			Date of Birth		____/____/____ (mm/dd/yyyy)								
Address																	
Contact Number						1. _____						2. _____					
Fax						E-mail											

II. Educational background Only fill out degrees of bachelor level or above. If the applicant is still studying for the degree, please fill in “incomplete.”

Graduated from/Studying at	Country	Major and department/institute	Degree	Start and end date (MM/YYYY)
				____/____ to ____/____

III. Current position and expertise-related experience Refers to full-time research positions. Please write the most current position first, and then earlier positions in order.

Service agency	Department/Institute	Title	Start and end date (MM/YYYY)
Current Position			____/____ to ____/____
Experience			____/____ to ____/____
			____/____ to ____/____
			____/____ to ____/____
			____/____ to ____/____

IV. Expertise Please fill in the expertise code of MOST projects related to personal research directions. If there are no appropriate codes, please select “other” and specify the expertise.

Code		Title		Code		Title	
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V. Catalogue of research results:

1. Please list personal academic publications within the past 5 years.
2. Please divide all academic publications into 3 categories: (A) Journal papers (already published or accepted) (B) Conference papers (C) Monographs and technical reports.
3. Please fill in works in the order they were published, and fill in the name of the author (according to the order in the original publication), year and month of the journal, title of the paper, journal name, and starting and ending page for each work.
4. Please specify if the academic work was cited in SCI, EI, or SSCI. If the work was the result of a research project subsidized by an external agency, please specify the agency and project number at the end.

Appendix Table 2 [If applicable]

**National Taiwan Normal University Major Instrument and Equipment
Management and Usage Benefits Report**

(Please fill in by year)

(I) Equipment name:

(II) Accounting year approved:

Amount approved: NTD

Amount of matching funds: NTD

Actual procurement amount: NTD

(III) Organizing College and Department/Institute:

(IV) Host:

Title:

Tel:

(V) Equipment management and maintenance (Please fill in the name of the manager, equipment management regulations, instrument use and maintenance situation, and surrounding equipment)

(VI) Work items completed and benefits (Include papers published and research project results from directly using the equipment. **※ Please present quantified data for review.**)

(VII) Equipment Use (**※ Please present quantified data for review.** Submit a copy of equipment use records)

(VIII) Service performance for other units in NTNU (Including benefits from supporting teaching and research. **※ Please present quantified data for review.**)

(IX) Evaluation of equipment use by the head of the organizing department/institute (evaluation of use for research and teaching)

Appendix Table 3

External scholar and expert recommendations for major instrument and equipment funding review and distribution in 20XX

Applicant: _____

Please recommend 4 external scholars and experts in fields related to the equipment for reference by the Task Force.

(Reviewers and applicants should comply to the Guidelines of Refusal and Confidential Operations in Reviewing Awards and Subsidies by the Ministry of Science and Technology and automatically avoid participating in the review.)

Order	Name	Current Position (Department/ Graduate institute, Title)	Expertise	Contact Number
				E-mail
1				
2				
3				
4				

Prepared by:

Head of Application Unit:

The following recommendations made by the Task Force's staff unit are provided to the Task Force for reference (not required for applicants).

Order	Name	Current Position (Department/ Graduate institute, Title)	Expertise	Contact Number
				E-mail
1				
2				
3				
4				

Appendix Table 4

**Scorecard I for Major Instrument and Equipment Funding Applications
in 20XX**

Applicant: _____

Equipment name: _____

Amount: NT\$ _____

(If the space provided in the table is insufficient, you may increase the number of rows.)

The purpose and necessity of funds for major instruments and expected benefits.

※ Comments and suggestions:

(Please provide your professional opinions regarding the necessity for acquiring the instrument, adequacy of personnel, suitability of instrument type, appropriateness of environment where instrument is located, and reasonableness of instrument price. Thank you.)

I. Necessity for acquiring the instrument

II. Adequacy of personnel

III. Suitability of instrument type

IV. Appropriateness of environment where instrument is located

V. Fairness in instrument pricing

VI. Whether the major equipment applied is at least NT\$5 million:

- Yes
- No

VII. Whether the applied equipment include engineering projects such as construction or repair:

- Yes (Please specify: _____)
- No

※ Score: _____ points. (Ranging from 0 to 100 points)

- Extraordinary (90-100 points) Excellent (80-89 points)
- Good (70-79 points) Fair (60-69 points) Fail (Below 60 points)

※ Recommended subsidy amount: NT\$ _____ (Please use Arabic numerals)

Signature of review committee member: _____

Date: MM/DD/YYYY

Appendix Table 5

Scorecard II for Major Instrument and Equipment Funding Applications in 20XX

Applicant: _____

Equipment name: _____

Amount: NT\$ _____

Assessment Items/ Distribution ratio (A)	Detailed Assessment Items	Weight (points)	Rating	Score	Subtotal
<p>(4) Performance over past years and applications 40%</p>	<p>① Performance in MOST Projects and industry-academia collaboration projects with government agencies and non-government organizations in the past 3 years (a) Performance in MOST Projects (excluding industry-academia collaboration projects with the MOST) in the past 3 years (b) Performance in industry-academia collaboration projects with government agencies (MOST, Ministry of Economic Affairs, Council of Agriculture, others) in the past 3 years (c) Performance in industry-academia collaboration projects with non-government organizations in the past 3 years</p>	<p>50 points</p>	<p><input type="checkbox"/> Extraordinary (41-50) <input type="checkbox"/> Excellent (31-40) <input type="checkbox"/> Good (21-30) <input type="checkbox"/> Fair (11-20) <input type="checkbox"/> Poor (0-10)</p>		
	<p>② Major instrument funding management and usage benefits in the past 3 years (2016-2018)</p>		<p>40 points</p>	<p><input type="checkbox"/> Extraordinary (33-40) <input type="checkbox"/> Excellent (25-32) <input type="checkbox"/> Good (17-24) <input type="checkbox"/> Fair (9-16) <input type="checkbox"/> Poor (0- 8) <input type="checkbox"/> 32 points for departments/institutes</p>	

			who did not submit any applications or no applications were approved in the past 3 years		
	<p>③ The scheme for matching funds (Applicants have to raise at least 15% of the final approved amount as matching funds).</p>	10 points	<p>The percentage of final approved amount:</p> <input type="checkbox"/> Above 30% (9- 10) <input type="checkbox"/> 26- 30% (7- 8) <input type="checkbox"/> 21- 25% (5- 6) <input type="checkbox"/> 16- 20% (3- 4) <input type="checkbox"/> 15% (2)		
(5) Contents of the applicant's presentation 10%	The applicant makes an oral presentation on the project.	100 points	<input type="checkbox"/> Extraordinary (81-100) <input type="checkbox"/> Excellent (61-80) <input type="checkbox"/> Good (41-60) <input type="checkbox"/> Fair (21-40) <input type="checkbox"/> Poor (0-20)		
Subtotal II (=1)+(2) (50 points in total)					

Work group: _____ Date: MM/DD/YYYY

Appendix Table 6

**Overall Scorecard for Major Instrument and Equipment Funding
Applications in 20XX**

Applicant: _____

Equipment name: _____

Amount:NT\$ _____

Assessment Items	Scores on detailed scorecard	Remark(s)
I. Assessment Items: Scorecard I [Subtotal I]		
II. Assessment Items (1) to (2): Scorecard II [Subtotal II]		
Total Score		

Work group: _____

Date: MM/DD/YYYY