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# Master of Science in Construction of Project Management

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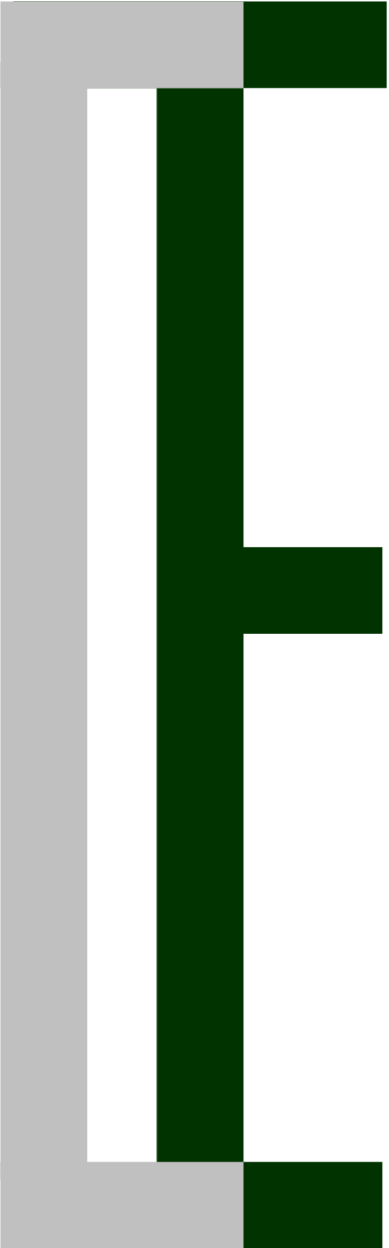
## Operational Plan

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2020-2024

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Vision of Civil Engineering: "Providing excellence in Civil Engineering at par the international standards"



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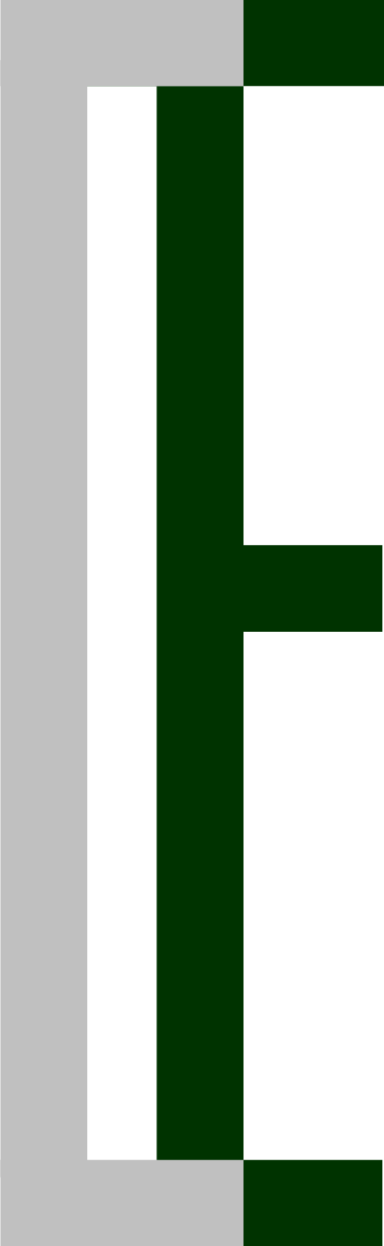
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## Purpose

Engineering touches all aspects of civilization. Great works of humankind, from the construction of the pyramids to the creation of the smart technology, are phenomena of engineering. Engineering is growing discipline that resuscitates itself to explore and create solutions to new engineering problems. Progress in engineering is determined by the application of varied fields of people understanding and subject to periods of rapid enlightenment brought about by advances in engineering technology. Thus, while strategic planning is important for any institution, it is critical for college of engineering where its role is two-fold: leadership in creating revolutionary technological advances through scientific and applied discovery; and education of students who will have a significant positive impact as per the societal needs. The process of strategic planning in an academic environment is unique, in part because the inputs and especially the outputs of the academic effort and the value that they add are often not readily quantifiable. How do we gauge the value added to society if a college of engineering, king Khalid university graduate becomes a teacher who inspires generations of students? We have tried to include intangibles in the process, tempering the value that scientists and engineers traditionally assign to metrics and balancing it with a healthy respect for elusive but very real qualities such as collegiality, integrity, and leadership.



## **About College of Engineering**

The Royal Decree Order No. (7 / B / 4096) was issued on 14/03/1420 H to establish the College of Engineering. The establishment of this college was decided to keep pace with the renaissance of the Kingdom in many areas as the engineering is a profession that employs science to serve the welfare of society as well as to follow the scientific progress and technology in the twenty-first century, to meet the engineering labour market needs in the southern and south-western regions of the kingdom. The college started its activities and functions on the academic year 1422/1423 H where 110 students were accepted in the first semester, they were distributed in the departments of Mechanical Engineering and Industrial Engineering.

Aware of the university to keep up with the prospects of scientific and technical development and the contribution of the university in filling manpower needs in the fields of engineering with highly qualified engineering staff. Aligning with the development plans of the Kingdom. It has been approved in 08/05/1426 H to create the departments of Electrical Engineering, Chemical Engineering, Civil Engineering departments as well as the department of Architecture and Planning.

### **College Vision**

To meet the international standards as a source of excellence in engineering learning and center of research in the university

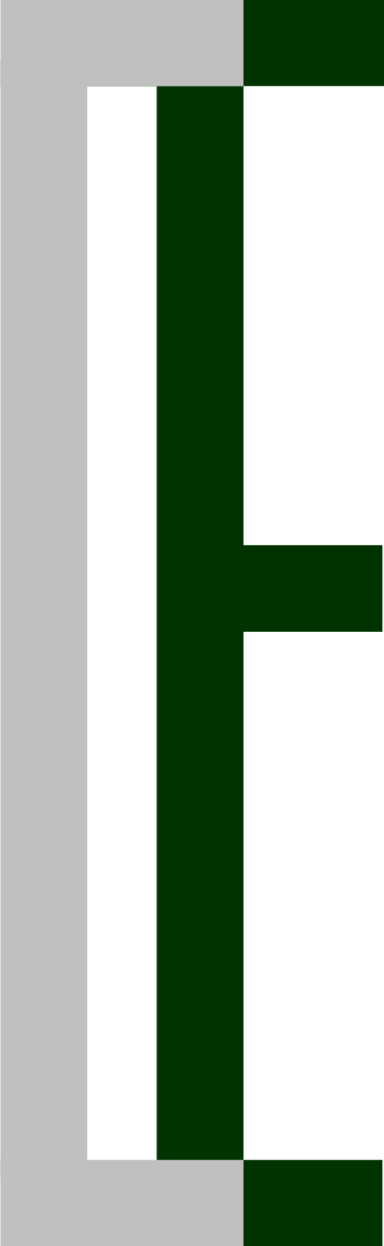
### **College Mission**

To prepare a qualified engineering staff equipped with essential knowledge and skills in dealing with modern engineering technologies, in order to develop and improve our country's future plans



## **Strategic Goals of College**

1. Academic excellence through development of curriculum at par with national and international standards.
2. Collaboration with colleges / universities for knowledge sharing and benchmarking.
3. Support innovative research to contribute to achieving the vision of King Khalid University.
4. Interaction with industries to produce trained and skilled graduates, solve real-life problems and obtain feedback for continuous improvement.
5. Contribute to the sustainable development of the community by continuing education, training and consultancy services.
6. Improvement in financial resources.



Until the 1st Semester of 2007 the Bachelor of Science in Civil Engineering program resides in the Department of Civil Engineering. The first batch of students in Civil Engineering graduated in 2012. The needs of the industry and the university's ability to respond to the needs have helped shape the growth of the programs offered by the department. The faculty/staff of the Civil Engineering (CE) Department has implemented many modifications to the CE curricula.

**Civil Engineering Program Vision:** Providing excellence in Civil Engineering at par the international standards.

**Civil Engineering Program Mission:** Providing a distinguished education and professional skills in Civil Engineering that enable to use modern technology for societal improvement through professional and ethical practices, innovative research and community services.

### **Strategic Goals of Civil Engineering**

1. Successfully enter the civil engineering profession as practicing engineers and consultants with prominent companies and organizations.
2. Incorporate economic, environmental, social, safety and global considerations when designing and investigating different systems.
3. Pursue professional licensure and engage in continued learning through professional development.
4. Pursue graduate education and research at major research universities in civil engineering.
5. Demonstrate leadership and service within their profession and in their communities through participation in professional societies and community services.



### **Strategic Goals of MSc. CPM program.**

- To equip graduates with diverse knowledge and skills that makes them capable of coping with the complex environment of construction project management
- To equip graduates for professional advancement, societal values, and leadership responsibility in their respective organizations
- To prepare graduates to pursue advanced degrees or seek professional certification in Construction Project Management or related field
- To prepare graduates to actively participate in professional and scientific activities of the region relevant to Construction Project Management

College Goals	CE Goals				
	Successfully enter the civil engineering profession as practicing engineers and consultants with prominent companies and organizations.	Incorporate economic, environmental, social, safety and global considerations when designing and investigating different systems.	Pursue professional licensure and engage in continued learning through professional development.	Pursue graduate education and research at major research universities in civil engineering.	Demonstrate leadership and service within their profession and in their communities through participation in professional societies and community services
Academic excellence through development of curriculum at par with national and international standards.	√	√			
Collaboration with colleges / universities for knowledge sharing and benchmarking.				√	
Support innovative research to contribute to achieving the vision of King Khalid University.		√	√	√	
Interaction with industries to produce trained and skilled graduates solve real-life problems and obtain feedback for continuous improvement.	√				√
Contribute to the sustainable development of the community by continuing education, training and consultancy services.		√			√
Improvement in financial resources.		√			√



College Goals	CPM Goals			
	To equip graduates with diverse knowledge and skills that makes them capable of coping with the complex environment of construction project management	To equip graduates for professional advancement, societal values, and leadership responsibility in their respective organizations	To prepare graduates to pursue advanced degrees or seek professional certification in Construction Project Management or related field	To prepare graduates to actively participate in professional and scientific activities of the region relevant to Construction Project Management
Academic excellence through development of curriculum at par with national and international standards.	√			
Collaboration with colleges / universities for knowledge sharing and benchmarking.		√		
Support innovative research to contribute to achieving the vision of King Khalid University.			√	√
Interaction with industries to produce trained and skilled graduates solve real-life problems and obtain feedback for continuous improvement.	√			√
Contribute to the sustainable development of the community by continuing education, training and consultancy services.		√		
Improvement in financial resources.				√

<b>Strategic CPM Goal No. 1</b>	To equip graduates with diverse knowledge and skills that makes them capable of coping with the complex environment of construction project management	Responsibility for Implementation: Department Council
<b>Description of Goals</b>	This strategic goal is related to produce trained and skilled graduates to improve graduate employability to authentic assessment activities, aligned with industry practices, standards and approaches. The primary focus is to fill the gaps between the perspectives of students, graduates, employers and higher education personnel to approach the overall higher education experience for heightened employability. The student believe to bolster graduate employability by promoting/supporting extra-curricular and co-curricular activities and skill development (technical and transferable) through work experience, internships and placements and other types of employability strategies. In addition, this strategic goal is related to progress towards academic excellence by providing adequate teaching-learning resources and conducive academic environment. The primary focus is to enhance quality of the academic system. It will include careful development of the curriculum at par with the standards of top national and international universities, providing tracks within the PG program by offering a range of elective subjects and aligning with community needs and industry requirements. The feedback of the stakeholders and independent reviewers should be taken to improve the curriculum. The student learning outcomes defined by NQF should be incorporated in the curriculum with well-defined process to measure, evaluate and improve. This goal will include meeting the academic criterion of national and international organizations and getting accreditation. To achieve this goal, it is important to recruit outstanding faculty and staff, maintain high faculty to student ratio, motivating the faculty and students for professional development. Ample resources are required to be provided for PG programs.	
<b>Expected Risks</b>	Inadequate financial resources > Large number of faculty members may leave simultaneously > Non-availability of specialized senior faculty for postgraduate programs > Poor response of students in self-financing (tuition fee paid by students) programs	
<b>Risk Management Plan</b>	Proposal and persuasion for additional financial support from the University ✓ Proper advertisement and information circulation for recruitment of senior faculty members at the levels of Associate Professor and Professor ✓ Development of state-of-art facilities for postgraduate programs at par with the best national and international universities and motivating the students to register ✓ Prepare a faculty database for quick recruitment process	

**Strategic CPM Goal No. 1:** To equip graduates with diverse knowledge and skills that makes them capable of coping with the complex environment of construction project management

Sl. No	KPI No.	Key Performance Indicators	NCAAA Ref. KPI	Responsibility For Measurement	Target Benchmark	Actual Benchmark	Measurement Method / Frequency	Responsibility of the Review
1	1.0	Stakeholder evaluation of the quality of learning experience in the program	KPI-PG02	Program Quality Coordinators			University experience survey / Annual	Chairman and Quality Unit
2	1.1	Students overall rating on the quality of their courses	KPI-PG03	Program Quality Coordinators			Data Analysis / Annual	Chairman and Quality Unit
3	1.2	Ratio of students to teaching staff	KPI-PG10	Statistical Unit			Survey / Annual	Chairman and Quality Unit
4	1.3	Proportion of teaching staff leaving the program	KPI-PG12	Recruitment Unit			Data Analysis / Annual	Chairman and Quality Unit
5	1.4	Satisfaction of beneficiaries with the learning resources	KPI-PG13	Program Quality Coordinators			Data Analysis / Annual	Chairman and Quality Unit
6	1.5	Stakeholder evaluation of library services adequacy and diversity of learning resources	KPI-PG17	Program Quality Coordinators			Data Analysis / Annual	Chairman and Quality Unit
7	1.6	Average number of students in the class	NA	Registrar			Data Analysis / Annual	Chairman and Quality Unit
8	1.7	Percentage of students entering programs who successfully complete first year	NA	Registrar			Data Analysis / Annual	Chairman and Quality Unit
9	1.8	Ratio of students to administrative staff	NA	Statistical Unit			Data Analysis / Annual	Chairman and Quality Unit
10	1.9	Proportion of students with nationality other than Saudi Arabia	NA	Registrar			Data Analysis / Annual	Chairman and Quality Unit

<b>Strategic CPM Goal No. 2</b>	To equip graduates for professional advancement, societal values, and leadership responsibility in their respective organizations	Responsibility for Implementation: Department Council
<b>Description of Goals</b>	<p>This strategic goal is related to monitor the progress towards meeting the community needs while ensuring that adequate resources are available. It seeks to contribute for a better quality of life for the stakeholders. A sustainable community resembles a living system in which human, natural and economic elements are interdependent and draw strength from each other. Potentially significant services like improved infrastructure, knowledge-based services, environmental technologies, improved management, continuing education and need based trainings shall be arranged to achieve this goal. Collaboration and benchmarking process can help in adopting processes to grow the performance and achieve the desired level of satisfaction in the areas of teaching-learning, administrative support and facility, research and community services.</p>	
<b>Expected Risks</b>	<ul style="list-style-type: none"> <li>➤ Inadequate financial resources</li> <li>➤ Rapid changes in the industry development</li> <li>➤ Limited public and private investments in infrastructure and services</li> <li>➤ Poor responses from the identified peer universities</li> </ul>	
<b>Risk Management Plan</b>	<ul style="list-style-type: none"> <li>➤ Proposal and persuasion for additional financial support from the University</li> <li>➤ Expanded delivery and use of information technologies</li> <li>➤ Sustainable training activities centered around areas of technical significance</li> <li>➤ Adding value to private sectors by conducting continuous consultancy services</li> <li>➤ Developing, manufacturing, services, and technologies that reduce environmental burdens</li> <li>➤ Improved consultancy services</li> <li>➤ Dedicated teaching or non-teaching staff members for the assigned tasks</li> </ul>	

**Strategic CPM Goal No. 2:** To equip graduates for professional advancement, societal values, and leadership responsibility in their respective organizations

Sl. No	KPI No.	Key Performance Indicators	NCAAA Ref. KPI	Responsibility For Measurement	Target Benchmark	Actual Benchmark	Measurement Method / Frequency	Responsibility of the Review
11	2.0	Proportion of students of other colleges/ universities who take courses in COE-KKU	NA	Registrar			Data Analysis / Annual	Vice Dean for Academic Affairs
12	2.1	Number of conferences, seminars and training programs	NA	Research Unit			Data Analysis / Annual	Vice Dean for Academic Affairs
13	2.2	Number of research or consultancy projects in COE-KKU in which faculty from other colleges/universities are involved	NA	Research Unit			Data Analysis / Annual	Vice Dean for Academic Affairs
14	2.3	Number of events (competitions, conferences etc.) participated by the students	NA	Chairman of the Program			Data Analysis / Annual	Chairman and Quality Unit
15	2.4	Proportion of full time teaching and other staff actively engaged in community service activities	KPI-PG20	Community Service Unit			University experience survey / Annual	Chairman and Quality Unit
16	2.5	Proportion of faculty who reviewed research article and masters/PhD thesis	NA	Research Unit			Data Analysis / Annual	Chairman and Quality Unit
17	2.6	Faculty satisfaction related to the involvement in community service activities	NA	Community Service Unit			Data Analysis / Annual	Chairman and Quality Unit
18	2.7	Percentage of students participated in community services	NA	Community Service Unit			Data Analysis / Annual	Chairman and Quality Unit
19	2.8	Number of professional training programs arranged by faculty	NA	Training & Alumni Unit			Data Analysis / Annual	Chairman and Quality Unit

<b>Strategic CPM Goal No. 3</b>	To prepare graduates to pursue advanced degrees or seek professional certification in Construction Project Management or related field	Responsibility for Implementation: Department Council
<b>Description of Goals</b>	To achieve the KKU's vision, this strategic goal creates international-standard research chairs, centers of excellence, research groups, and laboratories to encourage innovative research. Encourage researchers, recruit new research pioneers, and provide suitable research environment, including well-equipped laboratories, interdisciplinary and multidisciplinary teams, grants, and awards to improve research quality. Additionally, this goal is concerned with initiating cooperation with universities and industry, supporting postgraduate studies and embracing innovative ideas as well as pursue advanced degrees or seek professional certification in Construction Project Management or related field	
<b>Expected Risks</b>	<ul style="list-style-type: none"> <li>➤ Insufficiency of financial resources for labs</li> <li>➤ Rejection of research project fund applications</li> <li>➤ Low number of ISI publications</li> <li>➤ Failure to attract research pioneers</li> <li>➤ Poor retention of faculty</li> <li>➤ Excessive teaching and administrative work load</li> </ul>	
<b>Risk Management Plan</b>	<ul style="list-style-type: none"> <li>➤ Proposal and persuasion for additional financial support from the University</li> <li>➤ Apply for external funding from companies</li> <li>➤ Benefit from inscription in postgraduate studies, training and consultancy fees to support research</li> <li>➤ Propose attractive salaries for research pioneers</li> <li>➤ Prepare a database with different CVs of faculty and apply express (fast) recruitment procedure</li> <li>➤ Payment for extra hours for faculty</li> <li>➤ Incentives and remuneration for initiatives, administrative and research contributions</li> <li>➤ Supports and guidance to pursue the advanced degrees (PhD) and seek professional certification in Construction Project Management</li> </ul>	

<b>Strategic CPM Goal No. 3: To prepare graduates to pursue advanced degrees or seek professional certification in Construction Project Management or related field</b>								
<b>Sl. No</b>	<b>KPI No.</b>	<b>Key Performance Indicators</b>	<b>NCAAA Ref. KPI</b>	<b>Responsibility For Measurement</b>	<b>Target Benchmark</b>	<b>Actual Benchmark</b>	<b>Measurement Method / Frequency</b>	<b>Responsibility of the Review</b>
20	3.0	Total number of funded projects obtained from KKU during the last academic year (PI only)	NA	Research Unit			Data Analysis / Annual	Vice Dean for Academic Affairs
21	3.1	Students overall evaluation on the quality of their learning experiences at the institution	NA	Chairman of the Program			Data Analysis / Annual	Vice Dean for Academic Affairs/Chairman
22	3.2	Total amount of funded projects in SAR obtained from outside KKU during the last academic year (PI only)	NA	Research Unit			Data Analysis / Annual	Vice Dean for Academic Affairs
23	3.3	Number of faculty awards for innovative ideas, remarkable activities and teaching excellence	NA	Chairman of the Program			Data Analysis / Annual	Chairman and Quality Unit
24	3.4	Ratio of the number of the scientific articles published in ISI journal to the number of the overall articles published annually	NA	Research Unit			Data Analysis / Annual	Vice Dean for Academic Affairs
25	3.5	Number of research publications in Conferences (only first author from College of Engg.-KKU in the list of authors) during previous academic year	KPI-PG20	Research Unit			Data Analysis / Annual	Vice Dean for Academic Affairs
26	3.6	Number of patents, innovative products, and awards of excellence	KPI-PG19	Research U			Data Analysis / Annual	Vice Dean for Academic Affairs
27	3.7	Percentage of publications of faculty members	KPI-PG15	Research U			Data Analysis / Annual	Vice Dean for Academic Affairs
28	3.8	Citations rate in refereed journals per faculty member	KPI-PG17	Research U			Data Analysis / Annual	Vice Dean for Academic Affairs

<b>Strategic CPM Goal No. 4</b>	To prepare graduates to actively participate in professional and scientific activities of the region relevant to Construction Project Management	Responsibility for Implementation: Department Council
<b>Description of Goals</b>	This strategic goal is related to produce trained and skilled graduates to improve graduate employability to design assessment activities, aligned with industry practices, standards and approaches. The student learning outcomes defined by NQF explicitly articulate the relevant graduate employability skills in the learning outcomes for every subject, believe to bolster graduate employability by promoting/supporting extra-curricular and co-curricular activities and skill development (technical and transferable) through work experience, internships and placements and other types of employability strategies. To achieve this goal, the student should have transferable skills which are more important than the particular discipline of study for ensuring the employability. The feedback of the multiple stakeholders and reviewers should be given more importance to produce employable graduates with broad-based experience having ability to solve real life problems and sell their own personal identity, brand and profile. Graduates should be encouraged for lifelong learning to meet the expectations of employers. In addition, this goal also aims at improving the quality of research by encouraging researchers and attracting new research pioneers and providing adequate research environment including well-equipped laboratories, interdisciplinary and multidisciplinary teams, funds and awards.	
<b>Expected Risks</b>	<ul style="list-style-type: none"> <li>➤ Barriers to employment, such as gender, ethnicity and socio-economic background that may override employability strategies</li> <li>➤ Sudden change in required skills and demand in the job market</li> <li>➤ Insufficiency of financial resources</li> <li>➤ Low number of ISI publications</li> <li>➤ Failure to attract research pioneers</li> </ul>	
<b>Risk Management Plan</b>	<ul style="list-style-type: none"> <li>➤ Communication with employers and alumni to identify current needs and expectations from graduates</li> <li>➤ Special training and courses for students over and above the curriculum to meet desired employable skills</li> <li>➤ Motivation and soft skill development among graduates to meet unforeseen challenges</li> <li>➤ Proposal and persuasion for additional financial support from the University</li> <li>➤ Apply for external funding from companies</li> <li>➤ Benefit from inscription in postgraduate studies, training and consultancy fees to support research</li> <li>➤ Motivate and engage in actively participate in professional and scientific activities</li> </ul>	



**Strategic CPM Goal No. 4:** To prepare graduates to actively participate in professional and scientific activities of the region relevant to Construction Project Management

Sl. No	KPI No.	Key Performance Indicators	NCAAA Ref. KPI	Responsibility For Measurement	Target Benchmark	Actual Benchmark	Measurement Method / Frequency	Responsibility of the Review
28	4.0	Students overall evaluation on the quality of their learning experiences at the institution	NA	Chairman of the Program			Data Analysis / Annual	Vice Dean for Academic Affairs/Chairman
29	4.1	Employers' evaluation of the program/institution graduates proficiency	KPI-PG8	Chairman of the Program			Data Analysis / Annual	Vice Dean for Academic Affairs/Chairman
30	4.2	Proportion of graduation projects related to region relevant to Construction Project Management	NA	Chairman of the Program			Data Analysis / Annual	Vice Dean for Academic Affairs/Chairman
31	4.3	Percentage of self-income of the institution through consultancy and sponsored projects	NA	Chairman of the Program			Data Analysis / Annual	Vice Dean for Academic Affairs/Chairman
32	4.4	Number of research publications in Conferences (student involve)	NA	Research Unit			Data Analysis / Annual	Vice Dean for Academic Affairs/Chairman
33	4.5	Proportion of total operating funds (other than accommodation and student allowances) allocated to provision of student services	NA	Chairman of the Program			Data Analysis / Annual	Vice Dean for Academic Affairs/Chairman
34	4.6	Participation in conferences, seminars and training programs	NA	Chairman of the Program			Data Analysis / Annual	Vice Dean for Academic Affairs/Chairman
35	4.7	Membership in professional and scientific society	NA	Chairman of the Program			Data Analysis / Annual	Vice Dean for Academic Affairs/Chairman



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