

SDGs Report 2022-2023

DEPARTMENT OF MATERIALS

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Sr. #	Title	Page No.
1	About Department of Materials	3
2	Our Contribution to UN SDGs	4
3	SDG 1: No Poverty	5
4	SDG 2: Zero Hunger	7
5	SDG 3: Good Health and Well Being	9
6	SDG 4: Quality Education	13
7	SDG 5: Gender Equality	15
8	SDG 6: Clean Water and Sanitation	17
9	SDG 7: Affordable & Clean Energy	18
10	SDG 8: Decent Work and Economic Growth	19
11	SDG 9: Industry, Innovation, And Infrastructure	21
12	SDG 10: Reduce Inequalities	23
13	SDG 11: Sustainable Cities and Communities	24
14	SDG 12: Sustainable Consumption and Production	27
15	SDG 13: Climate Change	29
16	SDG 14: Life Below Water	31
17	SDG 15: Life on Land	32
18	SDG 16: Peace Justice and Strong Institutions	34
19	SDG 17: Partnership for the Goals	35
	Annexure	37

About Department of Materials

The Department of Materials is a leading academic department at National Textile University, Faisalabad, that offers a diverse range of programs in the field of materials science and engineering. Department boasts of a competitive pool of 11 faculty members, of which 70% are Ph.D. qualified. The undergraduate program (Bachelor of Science in Polymer Engineering) provides students with a comprehensive understanding of the properties and behavior of polymers, as well as their synthesis, processing, and application in various industries. Our graduates are well-equipped to pursue careers in fields such as plastics, composites, adhesives, and coatings. Currently, our undergraduate program in Polymer Engineering has an enrollment of approximately 130 students, with an average class size of 40 students. The Outcome Based Education system is followed and the program is accredited by the Pakistan Engineering Council.

The graduate program includes Master of Science in Advanced Materials, and Master of Science in Polymer Science & Engineering. These programs focus on the development and characterization of high-performance materials for applications in fields ranging from energy and electronics to biomedical engineering and aerospace. In addition, the department also offers a Ph.D. in Advanced Materials, which provides students with the opportunity to conduct original research in their chosen area of specialization.

The curriculum of these undergraduate and graduate programs has been vigilantly designed by keeping in view the current and future industry needs and is fully flexible for modification to keep pace with the rapidly changing production technologies around the globe. The overall focus is on developing concepts and skills in students through classroom learning, laboratory work, internship, industrial tours, etc. The program curriculum has a balanced combination of both engineering and non-engineering domain courses. The curriculum allows the students to get prepared for challenging industrial jobs and provides them the liberty to go for entrepreneurship and higher studies. The students are encouraged and facilitated to participate in extracurricular activities and scientific events, i.e., exhibitions, conferences, seminars, workshops.

Overall, the Department of Materials is dedicated to providing students with a world-class education in the field of materials science and engineering, preparing them for successful careers in a rapidly evolving global economy.



Our Contribution to UN SDGs

2022-23

The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. National Textile University, Faisalabad Pakistan has committed to measuring contribution to the UN SDGs and developing strategies accordingly. The Department of Materials (DoM) is a leading department of the School of Engineering and Technology, obliged to the excellent performance by high quality and world-changing research and inspirational teaching. DoM is moving on to take the first step towards the implementation of SDGs to prioritize its progress for social, economic, and environmental sustainability. This report represents the academic contribution to the SDGs as well as highlighting our potential engagement activities to integrate the SDGs Agenda into every life of the university.



1

No
POVERTYEnd poverty in all its forms
everywhere

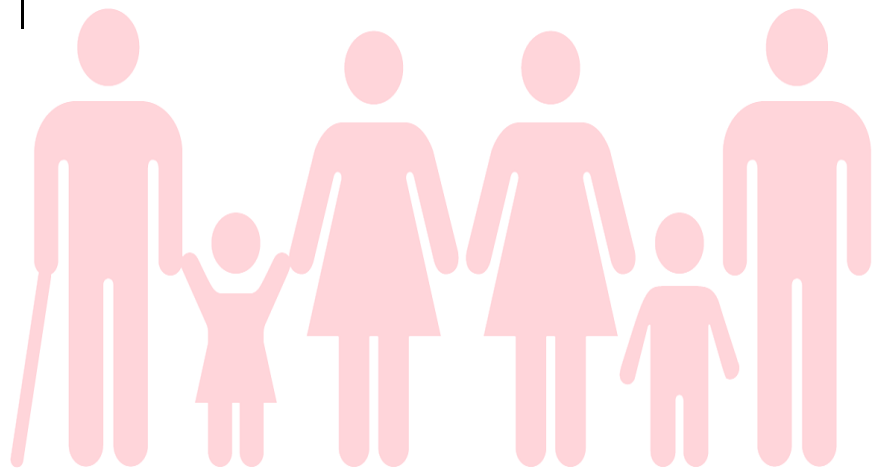
Engagement Activities



3
MoU/Collaborations



2
Events/Seminar



Fund Raising and Ramazan Drive in Collaboration with SSDG

Fund raising drive' towards the implementation of SDG-1 was launched with the collaboration of Society for Sustainable Development Goals (SSDG), NTU. Funds are provided to the daily wagers of the university during Ramazan, the people who were really in need of help and can't afford rashan package for Ramazan.



2 ZERO HUNGER

End hunger, achieve food security and improved nutrition and promote sustainable agriculture



Engagement Activities



3
MoU/Collaborations



1
Events/Seminar



Zero Hunger

DoM has collaborated with Society for Sustainable Development Goals, NTU and WWL (World Largest Lesson) towards the implementation of SDG-2. Zero hunger drive was interrelated with the fund raising. Team visited Slum areas and provided food packages to the residents.



3

GOOD
HEALTH &
WELL-BEINGEnsure healthy lives and promote
well-being for all at all ages

Teaching

13 modules
with direct
SDG

Research

6
FYPs11
Publications1
Funded Project

Engagement Activities

4
MoU/Collaborations6
Events/Seminar

Medical Camp in Collaboration with SSDG and YSF NOVATEK Pakistan

Take care of your body, it's the only thing you must live with. DoM and Society for Sustainable Development Goals NTU FSD organized an awareness camp on Good Health and Wellbeing in collaboration with Youth Serving Foundation (YSF) and NOVATEK PAKISTAN. The other collaborators were wings society, NCS and NTU OSH&E. The awareness was about Physiotherapy Screening and Prevention generally based on mental and physical health.

The camp started with an inauguration ceremony and a briefing session for the students about the importance of good health and wellbeing. A division of five booths was done to offer the students a proper way to analyze themselves. Different Screenings tests were performed by the students followed by a consultation from the doctors present in the specific booth. The camp ended with souvenirs, awarded to the guests by the society, and a group photo.



Volunteers of DoM & SSDG visited 'Sundas Foundation Faisalabad

Volunteers of DoM visited 'Sundas Foundation Faisalabad' and interacted with the Thalassemia patients. The motive of the drive was to tell the students regarding the importance of good health. Student spent their good time with Thalassemia' child-patient.



DoM' Society of Polymer Engineering has organized a Seminar on Industrial Safety Engineering

Society of Polymer Engineering, DoM has organized a seminar on Industrial Safety Engineering. The purpose of the event was to give awareness regarding Industrial Safety, Measurements, and precautions to NTU' students as well as to help fresh graduates in their professional careers.



Seminar on 'Depression and Stress Management was conducted by YSF Foundation'

The seminar on Depression and Stress Management was conducted by YSF foundation, whereas psychologists conducted counselling sessions to enhance the capacity building of students.



Seminar on Food Safety and Environmental Health

In the seminar, nutritionists shared knowledge of nutrient diets and their importance for the good health.



4 QUALITY EDUCATION

Ensure inclusive and equitable quality education and promote



Teaching



57 modules
with direct
SDG

Research



2
Publications

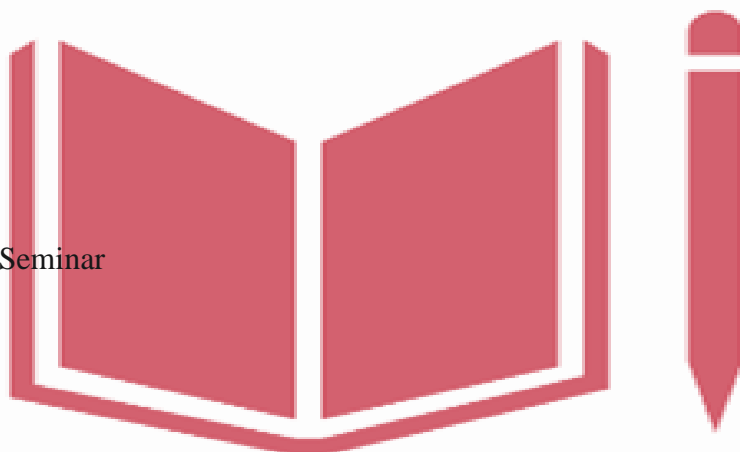
Engagement Activities



4
MoU/Collaborations



9
Events/Seminar



DoM Academic Programs

Department of Materials (DoM) offers a comprehensive curriculum of 1 BS (Polymer Engineering), 2 MS (Advance Materials Engineering & Polymer Science and Engineering) and 1 PhD (Advance Materials) program. BS Polymer Engineering has an enrollment of 129 students and boasts of a competitive pool of 11 faculty members, of which 70% are Ph.D. qualified.

Scholarships and Financial Support for Students

Merit Scholarships

First, Second & Third position holders of a class with a minimum CGPA 3.50 are awarded with Merit Scholarship. The scholarship covers:

1st Position: 100% Tuition Fee Waiver in next semester

2nd Position: 75% Tuition Fee Waiver in next semester

3rd Position: 50% Tuition Waiver in next semester

Strengthening Education's Contribution to the Fulfilment of Human Rights, Peace, and Responsible Citizenship with Numerous Activities

It is vital to give a central place to strengthening education's contribution to the fulfillment of human rights, peace, and responsible citizenship from local to global levels, gender equality, sustainable development, and health.

The activities were: Launch of the sustainability book club, Parliamentary style debate competition (which was named as Sustainable talk show), and the SDG game.



5 GENDER EQUALITY

Achieve gender equality and empower all women and girls



Teaching



2 modules
with direct
SDG

Research



4
Publications

Engagement Activities



2
MoU/Collaborations



1
Events/Seminar



6 CLEAN WATER & SANITATION

Ensure availability and sustainable management of water



Teaching



8 modules
with direct
SDG

Research



4
FYPs

9
Publications

Engagement Activities



1
MoU/Collaborations



1
Events/Seminar



7 AFFORDABLE & CLEAN ENERGY

Ensure access to affordable, reliable, sustainable and modern



Teaching



13 modules
with direct
SDG

Research



2
FYPs

Engagement Activities



1
MoU/Collaborations



1
Events/Seminar



8

**DECENT
WORK AND
ECONOMIC
GROWTH**

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all



Provision of Decent Work for Well-being and Sustainable Development

Teaching



77 modules
with direct
SDG

Research



1
FYPs

15
Publications

4
Funded
Projects

Engagement Activities



2
MoU/Collaborations

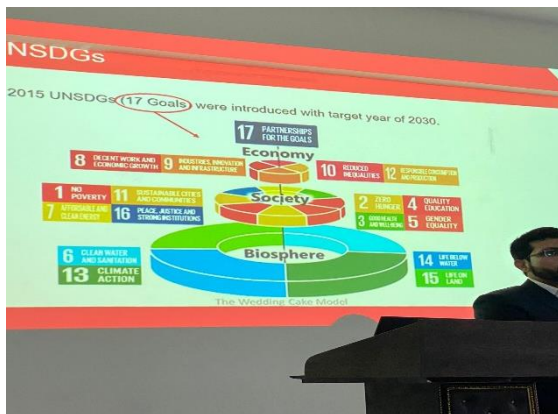


9
Events/Seminar

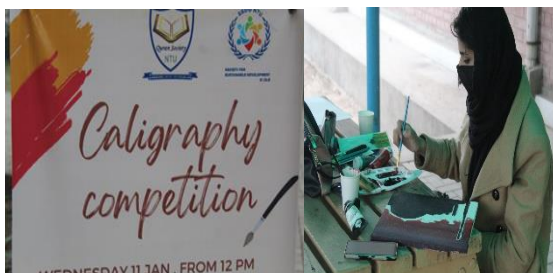


Workshop on Think Tank Challenge

To promote economic growth and decent work for all, mobilizing industry for a clean and circular economy is one of the key priorities of the Green Deal.



The activities that took place were Photography competition, Calligraphy competition, and a health workshop on think tank challenge.



DoM arranged a Training on "Business Development in Polymer Industry"

DoM arranged a training session on "Business Development in Polymer Industry". The objectives of this session were to introduce business start-up tips, responsibilities for business development and growing fields for polymer graduates; and to make them aware of possible industrial challenges as well as how can they avail job opportunities.



9

INDUSTRY,
INNOVATION, AND
INFRASTRUCTURE

Build resilient infrastructure, promote inclusive and sustainable



Teaching



221 modules
with direct
SDG

Research



21
FYPs

28
Publications

5
Funded Projects

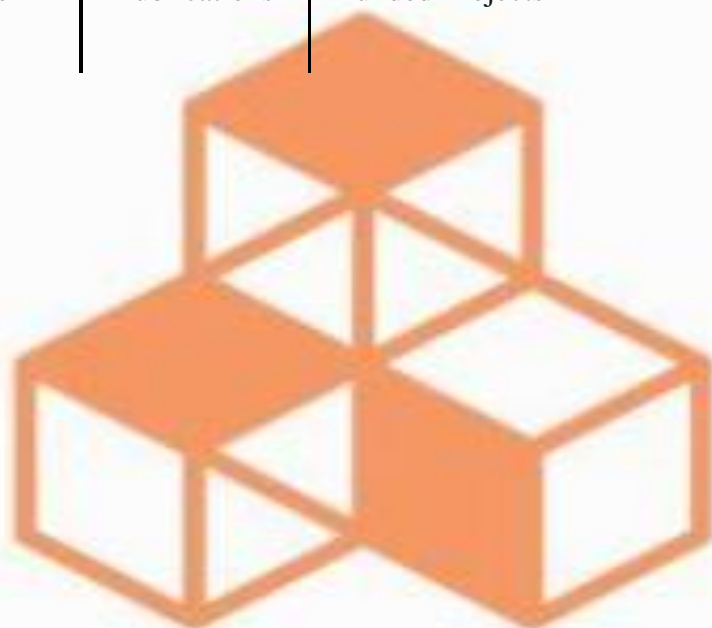
Engagement Activities



2
MoU/Collaborations

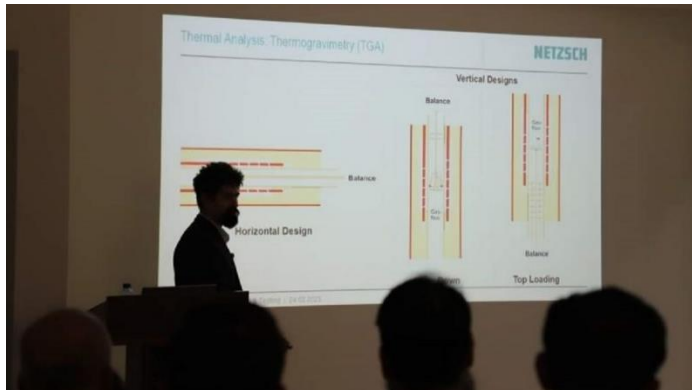


9
Events/Seminar



DoM arranged an event “Importance of Thermal Analysis in the Research and Innovation for Polymers and Textiles”

DoM arranged an event “Importance of Thermal Analysis in the Research and Innovation for Polymers and Textiles”. One day seminar was on different thermal analyzing equipment for laboratory staff and researchers in the field of polymers, textiles, metallurgy, chemicals & pharmaceuticals. The targeted audience of this seminar was 3rd & 4th year students, researchers, and laboratory officials. Dr. Omer Khalid was the guest speaker who is an Application Scientist in the company and an International Sales representative to Pakistan with the collaboration of Cosmos Science Corporation, Pakistan. He performed complete maintenance action and gave hands-on training of the Thermogravimetric Analyzer (TGA) of the latest model acquired from NETZSCH Germany installed in our Polymer Characterization Laboratory with demonstration and its applications arranged for faculty members, lab staff, and researchers of DoM, NTU. DoM greeting special thanks to NETZSCH Germany for their representative to us and Mr. Zain Rais from Cosmos Science Corporation.



REDUCE INEQUALITIES

10

Reduce inequality within and among countries



Teaching



4 modules with direct SDG

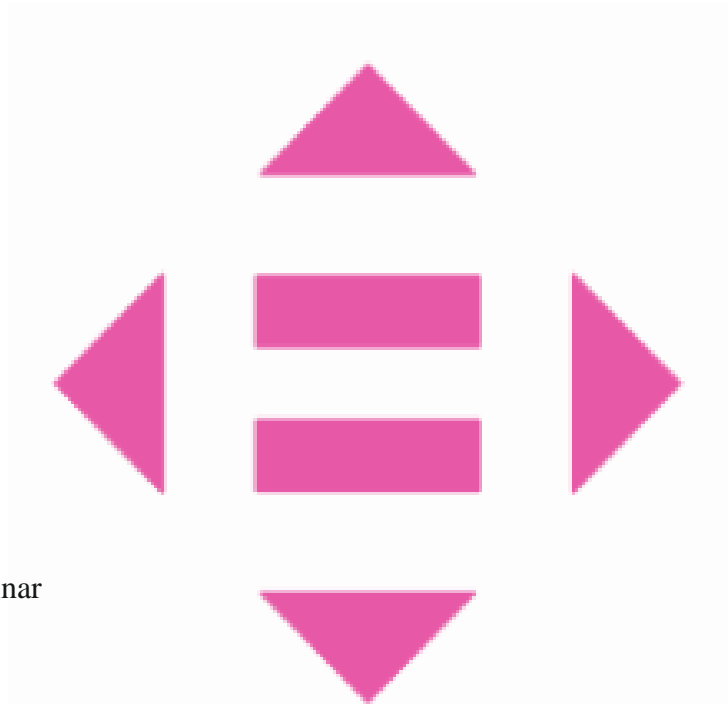
Engagement Activities



2 MoU/Collaborations



1 Events/Seminar



SUSTAINABLE CITIES AND COMMUNITIES

11

Make cities and human settlements inclusive, safe,



Teaching



16 modules with direct SDG

Research



2 FYPs

11 Publications

1 Funded Projects

Engagement Activities



1 MoU/Collaborations



4 Events/Seminar



Cleanliness Drive to Make Cities and Human Settlements Safe

Urban areas also serve as hubs for economic and social development and innovation and attract many people thanks to the wide range of opportunities for culture. Cities are consequently not just a source of economic, environmental, and social challenges but also a potential solution to these issues. As such, they can be considered a key driver for achieving a sustainable future. The activities executed were cleanliness drive and activity on 3Rs.

Volunteers from around the campus were gathered. Sidewalks of the Site “Manawala” were targeted, and the students cleaned all the places.



Traffic Awareness and Public Campaign for Road Safety

DoM has arranged awareness session was conducted in public, and the campaign was conducted on Club Road along with city traffic officer, FSD. The objectives of the drive were to make the public aware of keeping the roads clean and to guide them to sort plastic waste during traveling. Proper ways of plastic utilization in terms of single-use plastic and its adverse effects on the environment were also introduced during the campaign.



**SUSTAINABLE
CONSUMPTION
AND
PRODUCTION**

12

Ensure sustainable consumption and production pattern for all



Teaching



64 modules
with direct
SDG

Research



5
FYPs

1
Publications

3
Funded Projects

Engagement Activities



1
MoU/Collaborations



5
Events/Seminar



DoM' Participation in Pakistan Chemical Forum Exhibition, Seminars and Conferences Event

The Students of Polymer Engineering, DoM, displayed their R&D work through a booth in Pakistan Chemical Forum Exhibition, Seminars and Conferences at Expo Center Lahore. Information for Undergraduate Admissions in the Department of Materials and potential for collaboration in R&D activities were shared with the visitors by the faculty during the exhibition.



CLIMATE CHANGE

13

Take urgent action to combat climate change and its impacts



Teaching



9 modules
with direct
SDG

Research



3
FYPs

2
Funded Projects

Engagement Activities



2
MoU/Collaborations



5
Events/Seminar



Community Service Drive on Waste Management and Activities on 3R

DoM has initiated “Community Service Drive on Waste Management, the volunteers conducted their 1st session in public school. The purpose of this drive was to provide awareness of plastic usage & disposal by introducing the proper ways of sorting plastic waste and methods of its utilization. The drive also spread awareness about health issues regarding plastics usage and its adverse effects on the environment. Proper ways of plastic utilization in terms of single-use plastic and its adverse effects on the environment were also introduced.



Plantation Drive

DoM organized a Plantation drive in collaboration with NTU Green Youth Movement Club to combat climate change and improve air quality. This season we mainly focused on kitchen gardening and fruit trees.



LIFE BELOW WATER

14

Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Teaching



8 modules
with direct
SDG

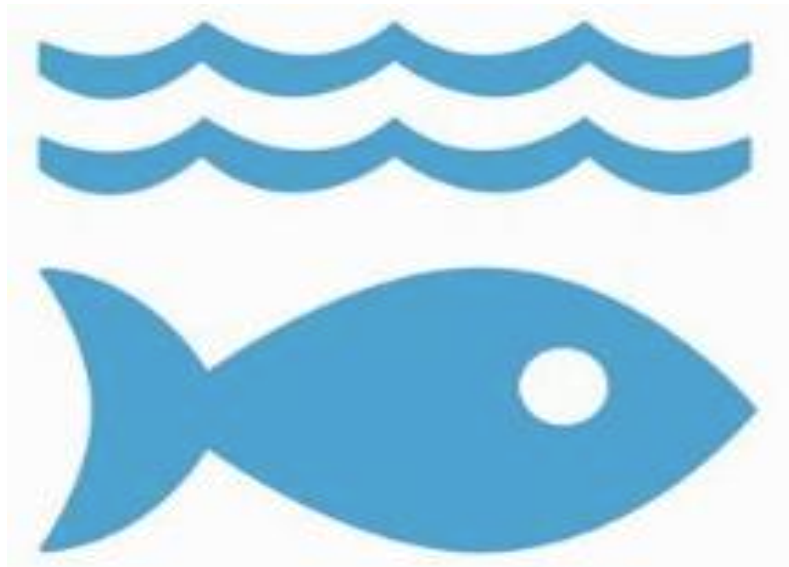
Engagement Activities



1
MoU/Collaborations



3
Events/Seminar



LIFE ON LAND

15

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss



Teaching



6 modules with direct SDG

Research



2 FYPs

Engagement Activities



2 MoU/Collaborations

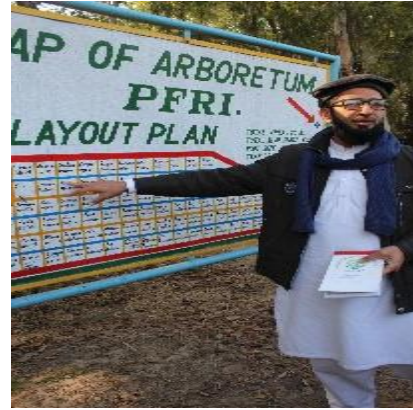


6 Events/Seminar



Students Visited Punjab Research Forest Institute Faisalabad and Circular Farming

Preserving diverse forms of life on land requires targeted efforts to protect, restore and promote the conservation and sustainable use of terrestrial and other ecosystems. Our efforts are to ensure the benefits of land-based ecosystems, including sustainable livelihoods, will be enjoyed for generations to come. The activities that took part on this day were visit to Punjab research forest institute Faisalabad, circular farming, and exhibition on product from waste. The other related activities that took part were cleanliness and plantation drive. The drive was conducted twice in a year. One time it was executed in the premises of the campus and the second time it happened outside the campus.



Punjab Research Forest Institute



**PEACE JUSTICE
AND STRONG
INSTITUTIONS**

16

Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

SHAPING PEACE TOGETHER FOR EQUITABLE AND SUSTAINABLE WORLD



Teaching



16 modules
with direct
SDG

Engagement Activities



2
MoU/Collaborations



1
Events/Seminar



PARTNERSHIP
FOR THE GOALS

17

Strengthen the means of implementation
and revitalize the Global Partnership for
Sustainable Development



Teaching



2 modules
with direct
SDG

Engagement Activities



2
MoU/Collaborations



4
Events/Seminar



MoU signed with SDG Academy for the Partnership of Goals

We have signed MoU with SDG Academy Pakistan for the partnership of goals. Chairman SDG's Academy Pakistan Mr. Ammar Jaffari was invited to sign the MOU between NTU and SDG Academy Pakistan. The ceremony took place at National Textile Research Centre NTU FSD. Thus, the convener Dr. Faiza Anjum along with the president Ms. Anum Mansoor were present on the behalf of the campus to perform the execution.



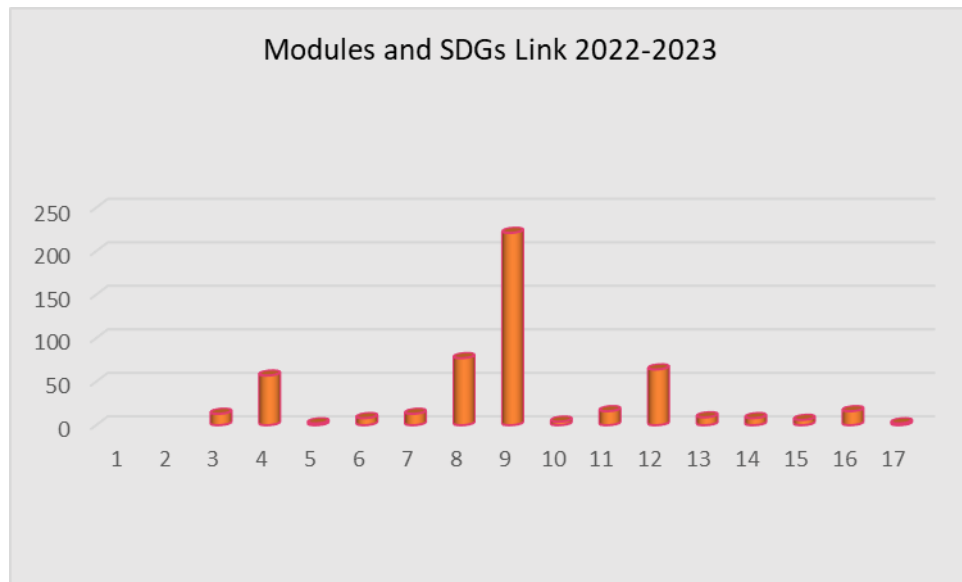
Display of SDGs' Flexes in University

Different sizes of flexes were displayed at all the departments of the campus. The flexes comprise all sustainable development goals. The team interacted with the students of NTU and raised awareness regarding sustainability.

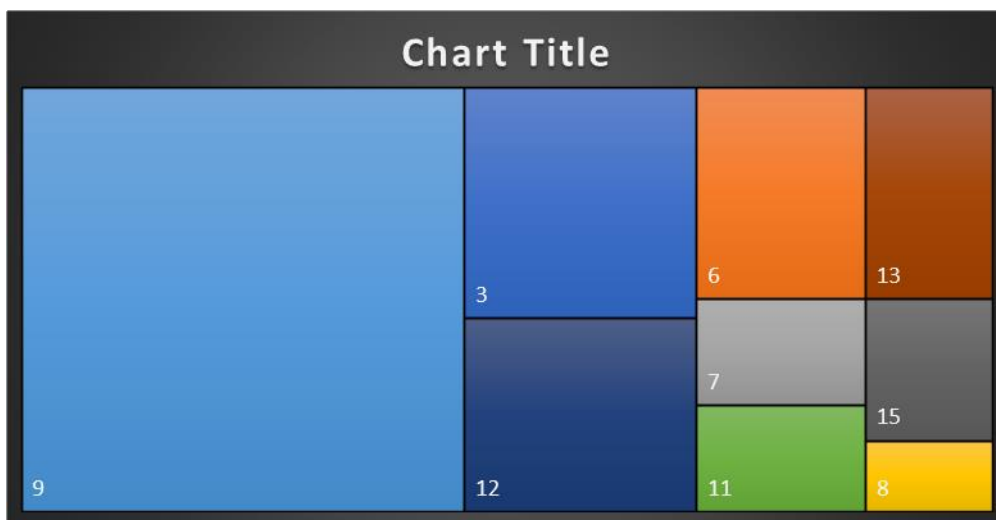
Glimpses



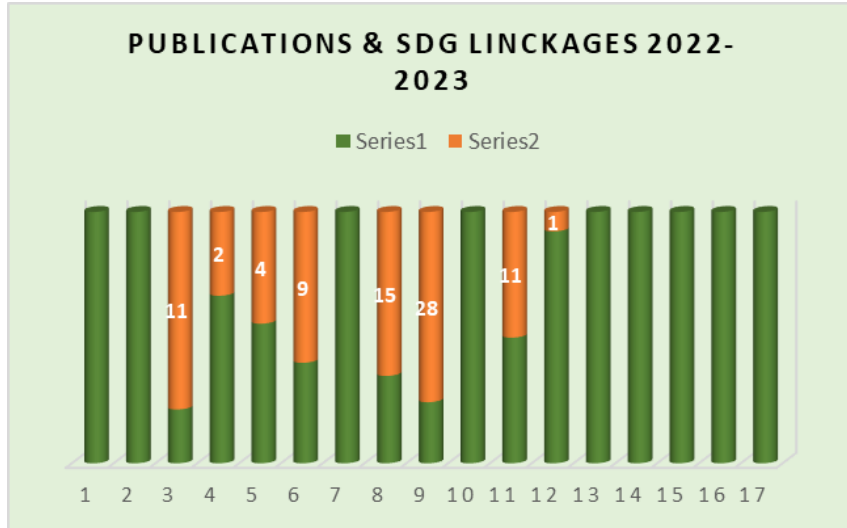
Modules and SDGs Link 2022-2023																	
SDGs No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Modules & SDGs			13	57	2	8	13	77	221	4	16	64	9	8	6	16	2



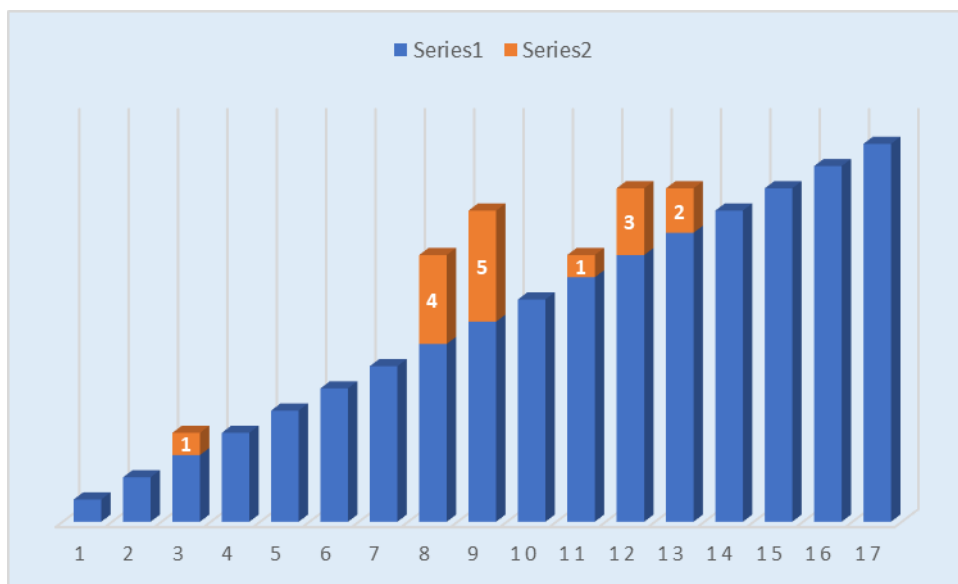
FYPs and SDGs Link 2022-2023																	
SDGs No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
FYPs and SDGs			6			4	2	1	21		2	3	5		2		



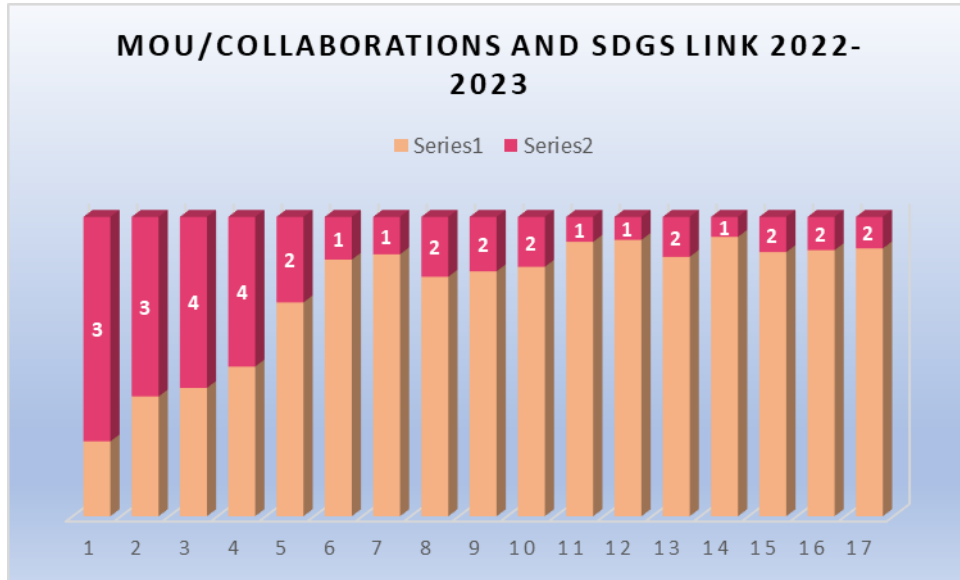
Publications & SDG Linkages 2022-2023																	
SDGs No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Publications & SDG			11	2	4	9		15	28		11	1					



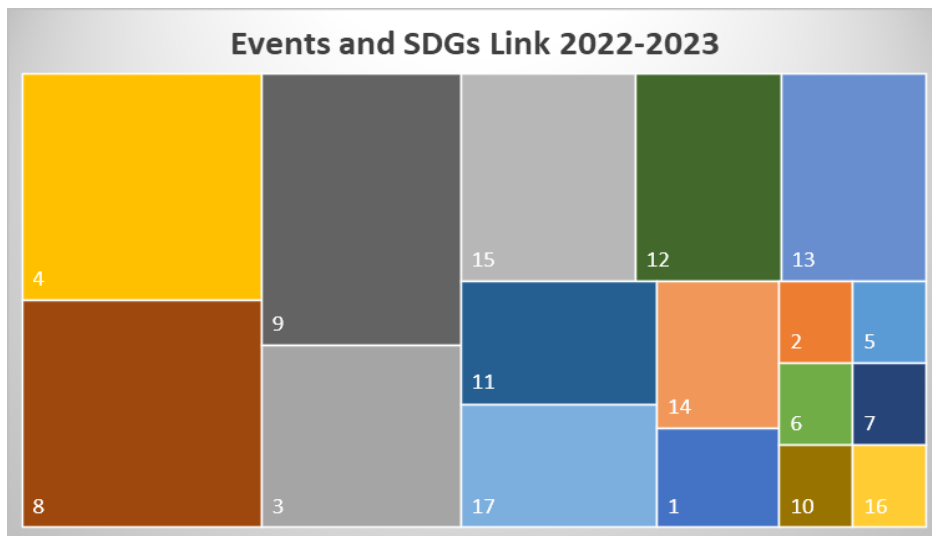
Funded Projects and SDGs Link 2022-2023																	
SDGs No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Funded Project & SDGs			1					4	5		1	3	2				



MoU/Collaborations and SDGs Link 2022-2023																	
SDGs No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
MoU & SDGs	3	3	4	4	2	1	1	2	2	2	1	1	2	1	2	2	2



Events and SDGs Link 2022-2023																	
SDGs No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
MoU & SDGs	2	1	6	9	1	1	1	9	9	1	4	5	5	3	6	1	4





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