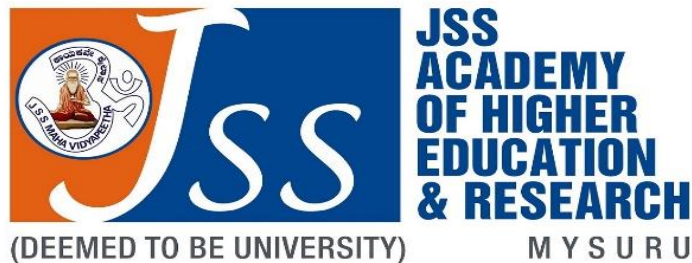




Education for



Sustainable Development Goals



JSS ACADEMY OF HIGHER EDUCATION & RESEARCH
Teaching & Learning of Activities in Achieving UN
Sustainable Development Goals

Teaching & Learning Objective Handbook
SDG-11- Sustainable Cities and
Communities

2022

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PREFACE

The United Nations' 2030 Agenda for Sustainable Development was adopted Globally in September 2015. It is underpinned by 17 Sustainable Development Goals (SDGs) and 169 targets and applies to every country. It helps people from various countries to work together to promote sustained and inclusive economic growth, social development and environmental protection and to benefit all, including future generations. The 2030 Agenda for Sustainable Development sets forth “a plan of action for people, planet and prosperity ” and “seeks to strengthen universal peace in larger freedom”.

This universal agenda requires an integrated approach to sustainable development and collective action, at all levels, to address the challenges of our time, with an overarching imperative of 'leaving no one behind' and addressing inequalities and discrimination as the central defining feature. Many countries , institutions and organisations have already started to translate the new agenda into their development plans, strategies and visions.

JSSAHER'S Social Responsibility is an approach of ethical and intelligent management, which involves both its impact on its human, social and natural context and its active role on the promotion of Sustainable Human Development of the country. Within this approach, “Sustainable Campus” is a strategy that strives to reduce the ecological footprint of the Institution via a rational use of resources and to educate the JSSAHER community on the ethics of sustainability.

Supporting the JSSAHER'S Social Responsibility, the SDG Hand Book explains the SDGs and their connection between the various goals and targets of JSSAHER . It provides a blueprint to help, identify, implement and achieve the Sustainable Development Goals (SDGs) at JSS AHER.

As the process moves towards implementation, there is a need to address the scope and systemic nature of the 2030 Agenda and the urgency of the challenges. This requires a wide range of tools and science-based analysis to navigate that complexity and to realise the ambition. JSSAHER having in place effective governance systems, institutions, partnerships, and intellectual and financial resources favouring effective, efficient and coherent approach for implementation of SDGs.

Dr.B.Suresh

Pro Chancellor

JSS Academy of Higher Education & Research, Mysuru &

President, Pharmacy Council of India

New Delhi

<https://www.jssuni.edu.in/JSSWeb/WebShowFromDB.aspx?MID=11011&CID=0&PID=10001>

PREAMBLE



SUSTAINABLE DEVELOPMENT GOALS

Education for

Sustainable Development Goals

By 2030, ensure that all learners acquire knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development.

Source: [The Sustainable Development Goals Report 2022](#)

<http://www.un.org/sustainabledevelopment/sustainable-development-goals>

[Access to Learning objectives for SDG-11](#)

[Education for Sustainable Development Goals: learning objectives - UNESCO Digital Library](#)

[United Nations, n.d.](#)

OBJECTIVE OF JSS ACADEMY OF HIGHER EDUCATION & RESEARCH TO PROMOTE EDUCATION FOR SUSTAINABLE DEVELOPMENT GOALS OF THE UNITED NATION IS TO MATCH THE TEACHING & LEARNING ACTIVITIES WITH SUSTAINABLE DEVELOPMENT GOALS THROUGH CURRICULUM DEVELOPMENT, ENHANCED RESEARCH AND EXTENDED OUTREACH ACTIVITIES.

INTRODUCTION

The Sustainable Development Goals – an ambitious and universal agenda to transform our world

On 25 September 2015, the UN General Assembly adopted the 2030 Agenda for Sustainable Development (UN, 2015). This new global framework to redirect humanity towards a sustainable path was developed following the United Nations Conference on Sustainable Development (Rio+20) in Rio de Janeiro, Brazil in June 2012, in a three-year process involving UN Member States, national surveys engaging millions of people and thousands of actors from all over the world.

At the core of the 2030 Agenda are 17 Sustainable Development Goals (SDGs). The universal, transformational and inclusive SDGs describe major development challenges for humanity. The aim of the 17 SDGs is to secure a sustainable, peaceful, prosperous, and equitable life on earth for everyone now and in the future. The goals cover global challenges that are crucial for the survival of humanity. They set environmental limits and set critical thresholds for the use of natural resources. The goals recognize that ending poverty must go together with strategies that build economic development. They address a range of social needs including education, health, social protection, and job opportunities while tackling climate change and environmental protection. The SDGs address key systemic barriers to sustainable development such as inequality, unsustainable consumption patterns, weak institutional capacity, and environmental degradation.

For the goals to be reached, everyone needs to do their part: governments, the private sector, civil society and every human being across the world. Governments are expected to take ownership and establish national frameworks, policies, and measures for the implementation of the 2030 Agenda.

A key feature of the 2030 Agenda for Sustainable Development is its universality and indivisibility. It addresses all countries – from the Global South and the Global North – as target countries. All countries subscribing to the 2030 Agenda are to align their own development efforts with the aim of promoting prosperity while protecting the planet to achieve sustainable development. Thus, with respect to the SDGs, all countries can be considered as developing and all countries need to take urgent action.

The 17 Sustainable Development Goals (SDGs)

No Poverty – End poverty in all its forms everywhere

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

Good Health and Well-Being – Ensure healthy lives and promote well-being for all at all ages

Quality Education – Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Gender Equality – Achieve gender equality and empower all women and girls

Clean Water and Sanitation – Ensure availability and sustainable management of water and sanitation for all

Affordable and Clean Energy – Ensure access to affordable, reliable, sustainable, and clean energy for all

Decent Work and Economic Growth – Promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all

Industry, Innovation and Infrastructure – Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Reduced Inequalities – Reduce inequality within and among countries

Sustainable Cities and Communities – Make cities and human settlements inclusive, safe, resilient and sustainable

Responsible Consumption and Production – Ensure sustainable consumption and production patterns

Climate Action – Take urgent action to combat climate change and its impacts

Life below Water – Conserve and sustainably use the oceans, seas and marine resources for sustainable development

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

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

Partnerships for the Goals – Strengthen the means of implementation and revitalize the global partnership for sustainable development

Source: <http://www.un.org/sustainabledevelopment/sustainable-development-goals>





TEACHING & LEARNING OBJECTIVES FOR SDG 11 JSS MEDICAL COLLEGE & HOSPITAL

SDG 11 - Sustainable Cities and Communities



Make cities and human settlements inclusive, safe, resilient and sustainable
Teaching & Learning objectives for SDG 11 “Sustainable Cities and Communities”

Subject/ topic/ course in regular curriculum relating to SDG -11	Community Medicine, Microbiology, Biochemistry, Medicine, Surgery, ENT
Cognitive Teaching & learning objectives	<p>At the end of First Professional Year, the learner should be able to;</p> <ul style="list-style-type: none"> • Define and classify hospital waste • Describe laws related to hospital waste management • Describe Classification of hospital waste and appropriate methods of disposal • Describe the methods used and significance of assessing the microbial contamination of food, water and air • Describe the aetiology and basis of water borne diseases/ jaundice/hepatitis/ diarrheal diseases • Describe toxic pollution of environment, its medico-legal aspects & toxic hazards of occupation and industry • Enumerate and describe the pathogenesis of disorders caused by air pollution

	<p>At the end of 3rd Professional Year-Part 1, the should be able to;</p> <ul style="list-style-type: none"> • Describe the health and social problems associated with rapid urbanization and globalization • Describe toxic pollution of environment, its medico-legal aspects & toxic hazards of occupation and industry • Enumerate and describe the pathogenesis of disorders caused by air pollution • Describe the health hazards of air, water, noise, radiation and pollution • Describe the concept of solid waste, human excreta and sewage disposal • Describe concepts of safe and wholesome water, sanitary sources of water, water purification processes, water quality standards, concepts of water conservation and rainwater harvesting • Describe the standards of housing and the effect of housing on health • Define and describe the concept of Disaster management • Describe disaster management cycle • Describe man-made disasters in the world and in India • Describe the details of the National Disaster management Authority • Enumerate and describe the identifying features and the principles of participatory management of mental illness occurring during and after disasters • Describe environmental influence on diseases of lungs • Describe the role of the environment in the cause and exacerbation of obstructive airway disease • Describe the environmental measures to maintain temperature <p>At the end of 3rd Professional Year-Part 2, the learner should be able to;</p> <ul style="list-style-type: none"> • Describe the national programs for prevention of deafness, cancer, noise & environmental pollution • Define and describe the environmental influence of occupational lung disease
Socio-emotional Teaching & learning objectives	<p>At the end of 3rd Professional Year-Part 1, the learner should be able to;</p> <ul style="list-style-type: none"> • Demonstrate ability to use local resources whenever required like in mass disaster situations
Behavioural Teaching & learning objectives	<p>At the end of 3rd Professional Year-Part 1, the learner should be able to;</p> <ul style="list-style-type: none"> • Demonstrate ability to use local resources whenever required like in mass disaster situations • Counsel the patient and family on prevention of various infections due to environmental issues

Topics for SDG 11 “Sustainable Cities and Communities”

1. Urbanization. Causes of urbanization and its health implications
2. Standard housing conditions in urban and rural areas in India
3. Slum, its upgradation, and health risks in slums
4. E-waste and its disposal
5. United Nations Educational, Scientific and Cultural Organisation (UNESCO), and its functions
6. Management and use of natural resources (renewable and non-renewable)
7. Sustainable energy and transportation
8. Laws and Regulations related to Factory workers and their safety
9. Disabled accessible cities
10. Environmental Social Responsibility

Learning approaches and methods for SDG 11 “Sustainable Cities and Communities”

1. Role play and drills related to Disaster Management
2. Poster competitions, essay writing on soil, water, air pollution, its hazards and methods to control and prevent them.
3. Case based discussion on influence of environmental factors in diarrhoeal diseases, pneumoconiosis and other lung disorders
4. Family Health Advisory Survey to obtain first hand information of environmental conditions and its influence on health in the field practice areas of Community Medicine department.
5. Practical exercises to assess the quality of water, quality of air and demonstrate methods to detect the water quality, and demonstrate the amount of bleaching powder required for purification of water sample.
6. Field visit to the factory to understand the safety standards to be followed to prevent ill-health of workers
7. Plantation of trees or demonstrating other methods of environmental social responsibility

TEACHING & LEARNING OBJECTIVES FOR SDG 11

JSS DENTAL COLLEGE & HOSPITAL

Subject/ topic/ course in regular curriculum relating to SDG 11	<ul style="list-style-type: none"> ● Waste generation and management -Reduce Reuse Recycle Rethink ● Health Planning ● Environment and Health (Housing) ● National Health Programs 	<ul style="list-style-type: none"> ● Public Health Dentistry ● All undergraduate and post graduate students
Cognitive Teaching & learning objectives	<ul style="list-style-type: none"> ● The learner understands basic physical, social and psychological human needs and is able to identify how these needs are currently addressed in their own physical urban, peri-urban and rural settlements. ● The learner can evaluate and compare the sustainability of their and other settlements' systems in meeting their needs particularly in the areas of food, energy, transport, water, safety, waste treatment, inclusion and accessibility, education, integration of green spaces and disaster risk reduction. ● The learner understands the historical reasons for settlement patterns and while respecting cultural heritage, understands the need to find compromises to develop improved sustainable systems. ● The learner knows the basic principles of sustainable planning and building, and can identify opportunities for making their own area more sustainable and inclusive. ● The learner understands the role of local decision-makers and participatory governance and the importance of representing a sustainable voice in planning and policy for their area. 	
Socio-emotional Teaching & learning objectives	<ul style="list-style-type: none"> ● The learner can connect with and help community groups locally and online in developing a sustainable future vision of their community. ● The learner can reflect on their region in the development of their own identity, understanding the roles that the natural, social and technical environments have had in building their identity and culture. ● The learner can contextualize their needs within the needs of the greater surrounding ecosystems, both locally and globally, for more sustainable human settlements. ● The learner can feel responsible for the environmental and social impacts of their own individual lifestyle. 	
Behavioural Teaching & learning objectives	<ul style="list-style-type: none"> ● The learner can plan & participate in community-based sustainability projects. ● The learner can participate in decision processes about their community. ● The learner can co-create an inclusive, safe, resilient and sustainable community. ● The learner can promote low carbon approaches at the local level. 	

Suggested topics for SDG 11 “Sustainable Cities and Communities”

The need for shelter, safety and inclusiveness (human needs, contextualizing our different individual and collective wants and needs according to gender, age, income and ability)

Management and use of natural resources (renewables and non-renewables)

Sustainable energy (residential energy use, renewable energies, community energy schemes) and transportation

Sustainable food (agriculture, organic agriculture and permaculture, community supported agriculture, foodshed⁸, food processing, dietary choices and habits, waste generation)

Urban ecology and how wildlife is adapting to humanity’s settlements

Sustainable resilient buildings and spatial planning (building materials, energy saving, planning processes)

Waste generation and management (prevention, reduction, recycling, reuse)

Communities and their dynamics (decision-making, governance, planning, conflict resolution, alternative communities, healthy communities, inclusive communities, ecovillages, transition towns)

Water cycle and restoring ground water through urban design (Green Roofs, rainwater harvesting, daylighting old river beds, sustainable urban drainage)

Disaster preparedness and resilience, resilience to weather problems and in the future and a culture of prevention and preparedness

Examples of learning approaches and methods for SDG 11 “Sustainable Cities and Communities”

Excursions to ecovillages and other “living laboratories”, to waste water treatment plants and other service centres to show current and best practice

Develop and run a (youth) action project on sustainable cities and communities

Invite older generations in to talk about how the settlement has changed over time. Ask them about their connection to the bioregion. Use art, literature and history to explore the settlement area and its changes

Build a community garden

Mapping projects: map the area to note where there is good use of public open space, human scale planning, areas where the needs of the community are addressed, green spaces, etc. This can also map the areas that need to be improved, such as areas most exposed to natural hazards

Develop a two-minute video clip on an example of a sustainable urban community Develop an enquiry-based project: “Would it be more sustainable if we all lived in cities?”

TEACHING & LEARNING OBJECTIVES FOR SDG 11

JSS COLLEGE OF PHARMACY, MYSORE

Subject/ topic/ course in regular curriculum relating to SDG 11	Pharmaceutical Chemistry, Pharmacotherapeutics, Pharmacology, Pharmacognosy, Pharmaceutics.
Cognitive Teaching & learning objectives	<p>At the end of course the learner should be able to,</p> <ul style="list-style-type: none"> • Classify and identify the resources for drug manufacturing. • Enlist the diseases caused due to environmental hazards, both physical and social • Identify natural resources and its indication in treatment of various diseases • Understand the importance of research for developing innovative manufacturing methods.
Socio-emotional Teaching & learning objectives	<p>At the end of final year, the student should be able to</p> <ul style="list-style-type: none"> • Educate the general public regarding life style modifications necessary for the prevention of disease. • Perform better biochemical waste management • Understand and support people suffering from emotional disabilities
Behavioural Teaching & learning objectives	<p>At the end of final year, the learner should be able to</p> <ul style="list-style-type: none"> • Conduct awareness programs for environmental safety • Health screening camp to provide services • Awareness camps on mental well-being to promote better quality of life

Examples of learning approaches and methods for SDG 11 “Sustainable Cities and Communities”

- Workshop on importance of green chemistry
- Awareness program for plastic free environment
- Awareness program on health policies that can help public to reduce health cost

. Suggested topics for SDG 11 “Sustainable Cities and Communities”

- Mock exercise on chemical and bio-medical waste disposal
- Co-curricular activities depicting safe environment (safe city and communities)
- Team based exercise to frame strategies to overcome inhibitions among students


TEACHING & LEARNING OBJECTIVES FOR SDG 11

JSS COLLEGE OF PHARMACY, OOTY

<p>Subject/ topic/ course in regular curriculum relating toSDG 11</p>	<ul style="list-style-type: none"> • M.Pharm, First Year, I Sem, Advanced Pharmaceutical Biotechnology, Biodegradation of xenobiotics, chemical and industrial wastes <p>Socio-emotional Teaching & learning objectives</p> <ul style="list-style-type: none"> • The learner can contextualize their needs within the needs of the greater surrounding ecosystems, both locally and globally, for more sustainable human settlements. • The learner can feel responsible for the environmental and social impacts of their own individual lifestyle. <p>Behavioural Teaching & learning objectives</p> <ul style="list-style-type: none"> • The learner can promote low carbon approaches at the local level.
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TEACHING & LEARNING OBJECTIVES FOR SDG 11

FACULTY OF HEALTH SYSTEM MANAGEMENT STUDIES

<p>Subject/ topic/ course in regular curriculum relating to SDG 11</p>	<ul style="list-style-type: none"> • Epidemiology-Health and Importance of public health practices- MBA HA-III Semester • Biostatistics-Vital Statistics-MBA-HA Elective -III Semester • Public Health- MBA HA - IV Semester • Environmental studies- BBA- Ist Semester • Service management- hospital and educational services- BBA- 1st Semester • Business law- Environment Protection Act-1986- V Unit-BBA HHSM-III Semester • Corporate social responsibility- BBA HHSM- V Semester
<p>Cognitive Teaching & learning objectives</p>	<ul style="list-style-type: none"> • The learner understands basic health human needs and is able to identify how this need is currently addressed in their own physical urban, peri-urban and rural settlements. • The learner can evaluate and compare the sustainability of their and other settlements' systems in meeting their needs particularly in the areas of health indicators. • The learner understands the role of local decision-makers and participatory governance and the importance of representing a sustainable voice in planning and policy for their health care facility • The learner understands the environmental issues of the nation and world and their role in changing environment • The learner understands the legal aspects of business can create awareness on its impact and pros and cons on their society
<p>Socio-emotional Teaching & learning objectives</p>	<ul style="list-style-type: none"> • The learner can influence their society to practice healthy habits for the betterment of society • The learner can understand the importance of health and public health to have a sustainable society • The learner will create awareness about government and other institutions support and efforts to reduce the public health problems and exploitation of the environment
<p>Behavioural Teaching & learning objectives</p>	<ul style="list-style-type: none"> • The learner can plan & participate in community-based health projects. • The learner can participate in decision processes about their community health. • The learner can co-create an inclusive, safe, resilient and sustainable community. <div style="text-align: center; margin-top: 10px;"> <p>NSS Activity</p>  </div>



TEACHING & LEARNING OBJECTIVES FOR SDG 11

JSS SCHOOL OF LIFE SCIENCES, OOTY

<p>Cognitive Teaching & learning objectives</p>	<ul style="list-style-type: none"> • The learner understands basic physical, social and psychological human needs and is able to identify how these needs are currently addressed in their own physical urban, peri-urban and rural settlements. • The learner can evaluate and compare the sustainability of their and other settlements' systems in meeting their needs particularly in the areas of food, energy, transport, water, safety, waste treatment, inclusion and accessibility, education, integration of green spaces and disaster risk reduction. • The learner understands the historical reasons for settlement patterns and while respecting cultural heritage, understands the need to find compromises to develop improved sustainable systems. • The learner knows the basic principles of sustainable planning and building, and can identify opportunities for making their own area more sustainable and inclusive. • The learner understands the role of local decision-makers and participatory governance and the importance of representing a sustainable voice in planning and policy for their area.
<p>Socio-emotional Teaching & learning objectives</p>	<ul style="list-style-type: none"> • The learner can connect with and help community groups locally and online in developing a sustainable future vision of their community. • The learner can reflect on their region in the development of their own identity, understanding the roles that the natural, social and technical environments have had in building their identity and culture. • The learner can contextualize their needs within the needs of the greater surrounding ecosystems, both locally and globally, for more sustainable human settlements. • The learner can feel responsible for the environmental and social impacts of their own individual lifestyle.
<p>Behavioural Teaching & learning objectives</p>	<ul style="list-style-type: none"> • The learner can plan & participate in community-based sustainability projects. • The learner can participate in decision processes about their community. • The learner can co-create an inclusive, safe, resilient and sustainable community. • The learner can promote low carbon approaches at the local level.

Suggested topics for SDG 11 “Sustainable Cities and Communities”

The need for shelter, safety and inclusiveness (human needs, contextualizing our different individual and collective wants and needs according to gender, age, income and ability)

Management and use of natural resources (renewables and non-renewables)

Sustainable energy (residential energy use, renewable energies, community energy schemes) and transportation

Sustainable food (agriculture, organic agriculture and permaculture, community supported agriculture, foodshed⁸, food processing, dietary choices and habits, waste generation)

Urban ecology and how wildlife is adapting to humanity’s settlements

Sustainable resilient buildings and spatial planning (building materials, energy saving, planning processes)

Waste generation and management (prevention, reduction, recycling, reuse)

Communities and their dynamics (decision-making, governance, planning, conflict resolution, alternative communities, healthy communities, inclusive communities, ecovillages, transition towns)

Water cycle and restoring ground water through urban design (Green Roofs, rainwater harvesting, daylighting old river beds, sustainable urban drainage)

Disaster preparedness and resilience, resilience to weather problems and in the future and a culture of prevention and preparedness

Examples of learning approaches and methods for SDG 11 “Sustainable Cities and Communities”

Excursions to ecovillages and other “living laboratories”, to waste water treatment plants and other service centres to show current and best practice

Develop and run a (youth) action project on sustainable cities and communities

Invite older generations in to talk about how the settlement has changed over time. Ask them about their connection to the bioregion. Use art, literature and history to explore the settlement area and its changes

Build a community garden

Mapping projects: map the area to note where there is good use of public open space, human scale planning, areas where the needs of the community are addressed, green spaces, etc. This can also map the areas that need to be improved, such as areas most exposed to natural hazards

Develop a two-minute video clip on an example of a sustainable urban community

Develop an enquiry-based project: “Would it be more sustainable if we all lived in cities?”

DEPARTMENT OF YOGA

Subject/ topic/ course in regular curriculum relating to SDG 11	<ul style="list-style-type: none"> The course MSc in Yoga has positive impact on achieving sustainable human settlements & communities.
Cognitive Teaching & learning objectives	<p>At the end of 2nd year and course the learner should be able to,</p> <ul style="list-style-type: none"> Understand demographic distribution, trends of health indicators such as disease burden among communities. Critically evaluate the specific health indicator, possible root cause and implementation of suitable strategies at rural or urban setup. Yoga education and its role in disease prevention. Identify opportunities for making their own area more sustainable and inclusive. Understands the role of local decision-makers and participatory governance for sustainable planning and policy for their area.
Socio-emotional Teaching & learning objectives	<p>At the end of 2nd year and course the learner should be able to,</p> <ul style="list-style-type: none"> Connect with and help community groups locally and online in developing a sustainable future vision of their community to provide Yoga education for good health and safe environment.
Behavioural Teaching & learning objectives	<p>At the end of 2nd year and course the learner should be able to,</p> <ul style="list-style-type: none"> Plan & participate in community-based Yoga programme.

Topics for SDG 11 “Sustainable Cities and Communities”

- Impact of urbanization on health & lifestyle.

Examples of learning approaches and methods for SDG 11 “Sustainable Cities and Communities”

- Develop strategies and connect with community groups locally and online in developing a sustainable future vision of their community to provide good health through yoga.
- Visit to health care setups, industries to prevent ill-health of workers and reduce negative impact on environment.
- Implement steps to improve health and well being using various databases such as NHFS national surveys.

BSC Yoga

Subject/ topic/ course in regular curriculum relating to SDG 11	The course BSc in Yoga has positive impact on achieving sustainable human settlements & communities.
Cognitive Teaching & learning objectives	<p>At the end of final Professional year, the learner should be able to,</p> <ul style="list-style-type: none"> • Yoga education and its role in disease prevention. • Identify opportunities for making their own area more sustainable and inclusive.
Socio-emotional Teaching & learning objectives	<p>At the end of final year the learner should be able to</p> <ul style="list-style-type: none"> • Connect with and help community groups locally and online in developing a sustainable future vision of their community to provide Yoga education for good health and safe environment.
Behavioural Teaching & learning objectives	<p>At the end of final year the learner should be able to</p> <ul style="list-style-type: none"> • Plan & participate in community-based Yoga programme.

Topics for SDG11“Sustainable Cities and Communities”

- Impact of urbanization on health & lifestyle.

Examples of learning approaches and methods for SDG11“Sustainable Cities and Communities”

- Develop strategies and connect with community groups locally and online in developing a sustainable future vision of their community to provide good health through yoga.
- Visit to health care setups, industries to prevent ill-health of workers and reduce negative impact on environment.

DEPARTMENT OF MICROBIOLOGY

Subject/ topic/ course in regular curriculum relating to SDG 11

- Biofertilizers & Biopesticides (BSc VI Sem); Bioremediation & Microbial Technology (BSc V Sem)

Cognitive Teaching & learning objectives

- The learner understands the negative affect of chemically synthesized pesticides; studies alternatives to chemically synthesized pesticides such as biopesticides and biofertilizers; understands usage of microorganisms in improving crop productivity and quality of soil; managing wastes by using microorganisms; the role of sustainable management of soil, air and water.

Socio-emotional Teaching & learning objectives

- The learner can connect with local farmers and tribal people to improve their socio-economic status by adopting biofertilizers and biopesticides; join hands with government and non - governmental organizations in managing waste; feel responsible for the environmental and social impacts of their own individual lifestyle

Behaviorial Teaching & Learning objectives

- The learner can plan Programmes in reduction of greenhouse gases; can develop startup ideas for sustainable management for waste; develop new alternatives from using fossil fuels; promote low carbon approaches at the local level.



Learning approaches and methods for SDG 11

- Microbiome of built environment
- Strategies to control reduction of bio-deterioration in materials
- Resilience and preparedness to biothreat



Suggested topics for students workshop

- Project on Bioremediation of hydrocarbon contaminated soils
- Training on sustainable management of wastes
- Activities with stakeholders to reduce effect of green house gases

Department of Environmental Sciences

Course Name in curriculum relating to SDG 11	<ul style="list-style-type: none"> • Natural Resources Management (DSC 02) • Sustainable Development (OEC 04) • Integrated Water Resource Management (DSE 02) • Water Energy and Food Nexus (DSE 04a)
Cognitive Teaching & learning objectives	<ul style="list-style-type: none"> • The learner understands basic physical, social and psychological human needs and can identify how these needs are currently addressed in their own physical urban, peri-urban and rural settlements. • The learner can evaluate and compare the sustainability of their and other settlements' systems in meeting their needs particularly in the areas of food, energy, transport, water, safety, waste treatment, inclusion and accessibility, education, integration of green spaces and disaster risk reduction. • The learner understands the historical reasons for settlement patterns and while respecting cultural heritage, understands the need to find compromises to develop improved sustainable systems. • The learner knows the basic principles of sustainable planning and building and can identify opportunities for making their own area more sustainable and inclusive. • The learner understands the role of local decision-makers and participatory governance and the importance of representing a sustainable voice in planning and policy for their area.
Socio-emotional Teaching & learning objectives	<ul style="list-style-type: none"> • The learner can connect with and help community groups locally and online in developing a sustainable future vision of their community. • The learner can reflect on their region in the development of their own identity, understanding the roles that the natural, social and technical environments have had in building their identity and culture. • The learner can contextualize their needs within the needs of the greater surrounding ecosystems, both locally and globally, for more sustainable human settlements. • The learner can feel responsible for the environmental and social impacts of their own individual lifestyle.
Behavioral Teaching & learning objectives	<ul style="list-style-type: none"> • The learner can plan & participate in community-based sustainability projects. • The learner can participate in decision processes about their community. • The learner can co-create an inclusive, safe, resilient, and sustainable community. • The learner can promote low carbon approaches at the local level.

Suggested topics for SDG 11 “Sustainable Cities and Communities”

- The need for shelter, safety, and inclusiveness (human needs, contextualizing our different individual and collective wants and needs according to gender, age, income, and ability)
- Management and use of natural resources (renewables and non-renewables)
- Sustainable energy (residential energy use, renewable energies, community energy schemes) and transportation
- Sustainable food (agriculture, organic agriculture and permaculture, community supported agriculture, foodshed⁸, food processing, dietary choices and habits, waste generation)
- Urban ecology and how wildlife is adapting to humanity’s settlements
- Sustainable resilient buildings and spatial planning (building materials, energy saving, planning processes) Waste generation and management (prevention, reduction, recycling, reuse)
- Communities and their dynamics (decision-making, governance, planning, conflict resolution, alternative communities, healthy communities, inclusive communities, ecovillages, transition towns)
- Water cycle and restoring ground water through urban design (Green Roofs, rainwater harvesting, daylighting old riverbeds, sustainable urban drainage)
- Disaster preparedness and resilience, resilience to weather problems and in the future and a culture of prevention and preparedness.

Examples of learning approaches and methods for SDG 11 “Sustainable Cities and Communities”

- Excursions to ecovillages and other “living laboratories”, to wastewater treatment plants and other service centers to show current and best practice.
- Develop and run a (youth) action project on sustainable cities and communities.
- Invite older generations in to talk about how the settlement has changed over time. Ask them about their connection to the bioregion. Use art, literature, and history to explore the settlement area and its changes.
- Build a community garden
- Mapping projects: map the area to note where there is good use of public open space, human scale planning, areas where the needs of the community are addressed, green spaces, etc. This can also map the areas that need to be improved, such as areas most exposed to natural hazards
- Develop a two-minute video clip on an example of a sustainable urban community Develop an enquiry-based project: “Would it be more sustainable if we all lived in cities?”

DEPARTMENT OF NUTRITION & DIETETICS

Subject/ topic/ course in regular curriculum relating to SDG 11	<ul style="list-style-type: none"> • The course MSc in Nutrition & Dietetics has positive impact on achieving sustainable human settlements & communities.
Cognitive Teaching & learning objectives	<p>At the end of 2nd year and course the learner should be able to,</p> <ul style="list-style-type: none"> • Understand demographic distribution, trends of health indicators such as malnutrition, disease burden among communities. • Critically evaluate the specific health / nutrition indicator, possible root cause and implementation of suitable strategies at rural or urban setup. • Evaluate and compare the sustainability of their and other settlements' systems in meeting their needs particularly in the food security, affordable/ accessible health care, nutrition education and disease risk reduction. • Identify opportunities for making their own area more sustainable and inclusive. • Understands the role of local decision-makers and participatory governance for sustainable planning and policy for their area.
Socio-emotional Teaching & learning objectives	<p>At the end of 2nd year and course the learner should be able to,</p> <ul style="list-style-type: none"> • Connect with and help community groups locally and online in developing a sustainable future vision of their community to provide good health, proper nutrition, and safe environment.
Behavioural Teaching & learning objectives	<p>At the end of 2nd year and course the learner should be able to,</p> <ul style="list-style-type: none"> • Plan & participate in community-based food and nutrition sustainability projects. • Co-create an inclusive, safe, resilient and sustainable community.

Examples of learning approaches and methods for SDG 11 “Sustainable Cities and Communities”

- Develop strategies and connect with community groups locally and online in developing a sustainable future vision of their community to provide good health, proper nutrition and safe environment.
- Visit to health care setups, industries to understand the safety standards to be followed to prevent ill-health of workers and reduce negative impact on environment.
- Implement steps to improve health and well being using various databases such as NHFS national surveys.

Suggested topics for SDG 11 “Sustainable Cities and Communities”

- Health hazards of air, water, noise, radiation and pollution .
- Policies & strategies of National health and disaster management.
- Education on use of affordable energy and waste management.
- Impact of urbanization on health & lifestyle.

MSc Sports Nutrition & Management

Subject/ topic/ course in regular curriculum relating to SDG 11	<ul style="list-style-type: none"> • Nutrition in cancer & inflammation/ sports specific diet and counselling/sports genetics and performance/nutrition support for special needs/ sports psychology and eating disorders
Cognitive Teaching & learning objectives	<p>At the end of 1st professional year, the student should be able to</p> <ul style="list-style-type: none"> • The learner understands basic physical, social and psychological human needs and is able to identify how these needs are currently addressed in their own physical urban, peri-urban and rural settlements. • The learner can evaluate and compare the sustainability of their and other settlements’ systems in meeting their needs particularly in the areas of food, energy, transport, water, safety, waste treatment, inclusion and accessibility, education, integration of green spaces and disaster risk reduction. • The learner understands the role of local decision-makers and participatory governance and the importance of representing a sustainable voice in planning and policy for their area.

Socio-emotional Teaching & learning objectives	<p>At the end of program, the student should be able to</p> <ul style="list-style-type: none"> • The learner can contextualize their needs within the needs of the greater surrounding ecosystems, both locally and globally, for more sustainable human settlements. • The learner can feel responsible for the environmental and social impacts of their own individual lifestyle.
Behavioural Teaching & learning objectives	<p>At the end of program, the student should be able to</p> <ul style="list-style-type: none"> • The learner can plan & participate in community-based sustainable food projects and co-create in safe, resilient, and sustainable community. • The learner can promote low carbon approaches at the local level.

Suggested topics for SDG 11 “Sustainable Cities and Communities”

Sustainable resilient buildings and spatial planning (building materials, energy saving, planning processes) Waste generation and management (prevention, reduction, recycling, reuse)

Water cycle and restoring ground water through urban design (Green Roofs, rainwater harvesting, daylighting old riverbeds, sustainable urban drainage)

Examples of learning approaches and methods for SDG 11 “Sustainable Cities and Communities”

Excursions to ecovillages and other “living laboratories”, to waste water treatment plants and other service centres to show current and best practice

Build a community garden

BSc Food, Nutrition & Dietetics

Subject/ topic/ course in regular curriculum relating to SDG 11	Food Microbiology, Food Quality Control, Food Processing and Technology, Food & Nutrition Security, Public Health and Community Nutrition
Cognitive Teaching & learning objectives	<p>At the end of 1 & 2nd Professional year, the learner should be able to,</p> <ul style="list-style-type: none"> • Natural energy resource management. Renewable and non-renewable; use of alternate energy resources • Sustainable energy (residential energy use, renewable energies, community energy schemes) and transportation • Sustainable food processing, kitchen garden, dietary choices and habits • Define and describe the concept of Disaster management 9. Describe disaster management cycle 1 • Describe man-made disasters in the world and in India. • Waste disposal and water purification • and E- coli detection in food and water • The learner understands basic physical, social and psychological human needs and is able to identify how these needs are currently addressed in their own physical urban, peri-urban and rural settlements. • Learn about sustainable food processing, dietary choices and habits • Learners learn about waste treatment and disposal, inclusion and accessibility, education. • Learn about sustainable food processing techniques, kitchen garden as sustainable approach to reduce micronutrient deficiency among vulnerable group, dietary choices and habits
Socio-emotional Teaching & learning objectives	<p>At the end of final year the learner should be able to</p> <ul style="list-style-type: none"> • The learner can connect with and help community groups locally and online in developing a sustainable future vision of their community. • The learner can reflect on their region in the development of their own identity, understanding the roles that the natural, social and technical environments have had in building their identity and culture. • The learner can contextualize their needs within the needs of the greater surrounding ecosystems, both locally and globally, for more sustainable human settlements. • The learner can feel responsible for the environmental and social impacts of their own individual lifestyle.
Behavioural Teaching & learning objectives	<p>At the end of final year the learner should be able to</p> <ul style="list-style-type: none"> • The learner can plan & participate in community-based sustainability projects. • The learner can participate in decision processes about their community. • The learner can co-create an inclusive, safe, resilient and sustainable community. • Disseminate the information with regard to proper dietary food intake to enhance the health of public

Examples of learning approaches and methods for SDG11 "Sustainable Cities and Communities"

- Case based discussion on influence of environmental factors in communicable diseases
- Family Health Advisory Survey to obtain first-hand information of environmental conditions and its influence on health in the field practice areas of Community Medicine department.
- Practical exercises to assess the quality of water, quality of air and demonstrate methods to detect the water quality, and demonstrate the amount of bleaching powder required for purification of water sample.
- Field visit to the factory to understand the safety standards to be followed to prevent ill-health of workers

Topics for SDG11 "Sustainable Cities and Communities"

- Urbanization. Causes of urbanization and its health implications
- Standard housing conditions in urban and rural areas in India
- Effective model to reduce food wastage,
- Innovatation in the field of environment friendly packaging material usage
- E-waste and its disposal

DIVISION OF COGNITIVE NEUROSCIENCE AND PSYCHOLOGY

Subject/ topic/ course in regular curriculum relating to SDG 11	<ul style="list-style-type: none"> • Community Psychology • Importance of community • An ecological- contextual model • Environmental Studies
Cognitive Teaching & learning objectives	<ul style="list-style-type: none"> • The learner understands basic physical, social and psychological human needs and is able to identify how these needs are currently addressed in their own physical urban, peri-urban and rural settlements. • The learner can evaluate and compare the sustainability of their and other settlements' systems in meeting their needs particularly in the areas of food, energy, transport, water, safety, waste treatment, inclusion and accessibility, education, integration of green spaces and disaster risk reduction. • The learner understands the historical reasons for settlement patterns and while respecting cultural heritage, understands the need to find compromises to develop improved sustainable systems. • The learner knows the basic principles of sustainable planning and building, and can identify opportunities for making their own area more sustainable and inclusive. • The learner understands the role of local decision-makers and participatory governance and the importance of representing a sustainable voice in planning and policy for their area.
Socio-emotional Teaching & learning objectives	<ul style="list-style-type: none"> • The learner can connect with and help community groups locally and online in developing a sustainable future vision of their community. • The learner can reflect on their region in the development of their own identity, understanding the roles that the natural, social and technical environments have had in building their identity and culture. • The learner can contextualize their needs within the needs of the greater surrounding ecosystems, both locally and globally, for more sustainable human settlements. • The learner can feel responsible for the environmental and social impacts of their own individual lifestyle.
Behavioural Teaching & learning objectives	<ul style="list-style-type: none"> • The learner can plan & participate in community-based sustainability projects. • The learner can participate in decision processes about their community. • The learner can co-create an inclusive, safe, resilient and sustainable community. • The learner can promote low carbon approaches at the local level.

Suggested topics for SDG 11 “Sustainable Cities and Communities”

Environmental pollution and policies

Management and use of natural resources (renewables and non-renewables)

Sustainable energy (residential energy use, renewable energies, community energy schemes) and transportation

Sustainable food (agriculture, organic agriculture and permaculture, community supported agriculture, foodshed³, food processing, dietary choices and habits, waste generation)

Urban ecology and how wildlife is adapting to humanity’s settlements

Wildlife protection and forest conservation

Communities and their dynamics (decision-making, governance, planning, conflict resolution, alternative communities, healthy communities, inclusive communities, ecovillages, transition towns)

Human Communities and the environment

Resettlement and rehabilitation project

Examples of learning approaches and methods for SDG 11 “Sustainable Cities and Communities”

Excursions to collages and other “living laboratories”, to waste water treatment plants and other service centres to show current and best practice

Develop and run a (youth) action project on sustainable cities and communities

Invite older generations in to talk about how the settlement has changed over time. Ask them about their connection to the bioregion. Use art, literature and history to explore the settlement area and its changes

Build a community garden

Mapping projects: map the area to note where there is good use of public open space, human scale planning, areas where the needs of the community are addressed, green spaces, etc. This can also map the areas that need to be improved, such as areas most exposed to natural hazards

Develop a two-minute video clip on an example of a sustainable urban community

Develop an enquiry-based project: “Would it be more sustainable if we all lived in cities?”

DIVISION OF MEDICAL STATISTICS

Subject/ topic/ course in regular curriculum relating to SDG 11	<ul style="list-style-type: none"> • Mathematical Statistics • Data analytics
Cognitive Teaching & learning objectives	<ul style="list-style-type: none"> • The learner understands basic physical, social and psychological human needs and is able to identify how these needs are currently addressed in their own physical urban, peri-urban and rural settlements. • The learner can evaluate and compare the sustainability of their and other settlements' systems in meeting their needs particularly in the areas of food, energy, transport, water, safety, waste treatment, inclusion and accessibility, education, integration of green spaces and disaster risk reduction. • The learner understands the historical reasons for settlement patterns and while respecting cultural heritage, understands the need to find compromises to develop improved sustainable systems. • The learner knows the basic principles of sustainable planning and building, and can identify opportunities for making their own area more sustainable and inclusive. • The learner understands the role of local decision-makers and participatory governance and the importance of representing a sustainable voice in planning and policy for their area.
Socio-emotional Teaching & learning objectives	<ul style="list-style-type: none"> • The learner can connect with and help community groups locally and online in developing a sustainable future vision of their community. • The learner can reflect on their region in the development of their own identity, understanding the roles that the natural, social and technical environments have had in building their identity and culture. • The learner can contextualize their needs within the needs of the greater surrounding ecosystems, both locally and globally, for more sustainable human settlements. • The learner can feel responsible for the environmental and social impacts of their own individual lifestyle.
Behavioural Teaching & learning objectives	<ul style="list-style-type: none"> • The learner can plan & participate in community-based sustainability projects. • The learner can participate in decision processes about their community. • The learner can co-create an inclusive, safe, resilient and sustainable community. • The learner can promote low carbon approaches at the local level.

Suggested topics for SDG 11 “Sustainable Cities and Communities”

- ✓ Big data and sustainable cities: applications of statistics
- ✓ Remote Sensing and Spatial Statistical Tool
- ✓ [Data Under Geostatistical Methods](#)
- ✓ Statistical distribution and interaction

Examples of learning approaches and methods for SDG 11 “Sustainable Cities and Communities”

- ✓ To analyse intra-urban inequalities and public intervention
- ✓ Examining the association between socio-demographic composition using spatial regression approach
- ✓ Sustainable and smart city planning using spatial data
- ✓ Geospatial Technology in Sustainable Cities and Communities using ML models

DIVISION OF GEOINFORMATICS

Subject/ topic/ course in regular curriculum relating to SDG 1	<ul style="list-style-type: none"> • GIS for smart city, urban planning, • Transport planning, disaster management, and Solid waste management using GIS. • Urban flood, pollution, crime analysis using GIS. • rainwater harvesting and drainage planning in urban
Cognitive Teaching & learning objectives	<p>At the end of 2nd year the learner should be able to</p> <ul style="list-style-type: none"> • Understand the importance of GIS in Sustainable Urban Planning and Management. • Understands the role of local decision-makers and participatory governance and the importance of GIS in planning and policy for their area.
Socio-emotional Teaching & learning objectives	<p>At the end of final year the student should be able to</p> <ul style="list-style-type: none"> • The learner can connect with and help community groups locally and online in developing a sustainable future vision of their community. • The learner can reflect on their region in the development of their own identity, understanding the roles that the natural, social and technical environments have had in building their identity and culture. • The learner can contextualize their needs within the needs of the greater surrounding ecosystems, both locally and globally, for more sustainable human settlements. • The learner can feel responsible for the environmental and social impacts of their own individual lifestyle.
Behavioural Teaching & learning objectives	<p>At the end of the program the learner should be able to</p> <ul style="list-style-type: none"> • plan & participate in community-based sustainability projects. • Participate in decision processes about their community. • Co-create an inclusive, safe, resilient and sustainable community. • Study and resource needs, plan efficient land use and protect the environment by guaranteeing the survival of future generations.

. Suggested topics for SDG 11 “Sustainable Cities and Communities.”

- GIS in Sustainable Urban Planning and Management - OAPEN Management and use of natural resources (renewables and non-renewables)
- GIS for Sustainable Energy (residential energy use, renewable energies, community energy schemes) and transportation
- Sustainable food, climate change, and GIS
- Human-Animal conflict using GIS and Remote Sensing.
- Sustainable, resilient buildings and spatial planning (building materials, energy-saving, planning processes) Waste generation and management (prevention, reduction, recycling, reuse) using GIS
- Water cycle and restoring groundwater through urban design (Green Roofs, rainwater harvesting, daylighting old riverbeds, sustainable urban drainage)
- GIS for disaster preparedness and resilience, resilience to weather problems and in the future and a culture of prevention and preparedness.
- Land use and urban sustainability assessment

Examples of learning approaches and methods for SDG 11 “Sustainable Cities and Communities.”

- Case Studies: GIS for smart cities and planning
- Mapping projects: map the area to note where there is a good use of public open space, human-scale planning, areas where the needs of the community are addressed, green spaces, etc. This can also map the areas that need to be improved, such as areas most exposed to natural hazards.
- Develop an enquiry-based project: “Would it be more sustainable if we all lived cities?”



‘Touching the lives of Millions’

Focusing on a purpose as expansive and yet as specific as improving quality of life through Human Development, the JSS Mahavidyapeetha has grown from strength to strength. A long and healthy life, Education for all and a decent standard of living, the indicators of Human development, have been the underlying philosophy of Jagadguru Sri Veerasimhasana Mahasamsthana Math, Suttur Srikshethra, for centuries. This is also the philosophy for which the Mahavidyapeetha today stands for.

Under the untiring efforts of Jagadguru Dr. Sri Shivarathri Rajendra Mahaswamiji, the Mahavidyapeetha has witnessed enormous growth in the field of education and today has over 300 institutions under its fold, from kindergartens to postgraduate centres and postdoctoral research catering to the educational needs of more than 1,00,000 students.

The Mahavidyapeetha continues to play an important role in expanding the scope of its activities to several branches of knowledge, welfare, and culture. Its educational efforts span crèches for toddlers of working rural women, schools to impart primary and secondary education in both Kannada and English medium, Colleges, Polytechnics, Technical, Medicine, etc. For realizing its mission, it has equipped itself with an extensive infrastructure and an army of dedicated and highly qualified human resource. These institutions, located in strategic areas, serve a broad spectrum of society, from virtually remote tribal villages to metropolitan cities such as Bengaluru, Noida, New Delhi, Ooty, and Coimbatore, besides their presence in United States, Mauritius, and Dubai.

Apart from formal education, the initiatives stretch to integrated rural development through training and empowering of rural folk, reaching out healthcare to people through modern and traditional Indian systems of medicine, patronizing literary activities, visual arts, performing arts, restoration of temples and historical monuments.

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