



Chair Environmental Safety and Sustainable Development of Regions
Institute of Earth Sciences
Saint Petersburg State University

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Modernization of the MS Environmental Management
Program curriculum at SPBU in the context of MS
Sustainability Educational Programs of the world's leading
universities

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Overview

1. Background and Global Agenda for Environmental Education
2. Environmental Management MS Programme Globally
3. Environmental Management MS Programme at Saint Petersburg State University
4. Contemporary Challenges & Modernization Process (linking with Professional Standards/Codes and Employees)
5. Green Job Market



Background and Global Agenda for Environmental Education

The United Nations Decade of Education for Sustainable Development (2005-2014) (DESD) aimed at integrating the principles and practices of sustainable development into all aspects of education and learning, to encourage changes in knowledge, values and attitudes with the vision of enabling a more sustainable and just society for all.

<https://sustainabledevelopment.un.org/index.php?page=view&type=400&nr=1682&menu=35>





Continuous Education levels

Early childhood care and education

Primary and secondary education

Technical and vocational education and training

Higher education

Non-formal education, public awareness campaigns and media



Contemporary Environmental Education Agenda:

1. Mainstreaming Environmental Education into general education (a lot of work has been done already)
2. Focused Environmental Education Programs (many? Fast moving requirements)



Environmental Management MS Programme Globally

search:

<http://www.masterstudies.com/Masters-Degree/Environmental-Studies/Environmental-Management/>

Compare 48 Masters Programs in Environmental Management

<http://www.bachelorsportal.eu/study-options/268927263/environmental-management-united-kingdom.html>

19 Environmental Management Bachelor's degrees in United Kingdom

http://study.com/environmental_management_degree.html

programs, salaries

<http://www.best-masters.com/ranking-master-sustainable-development-and-environmental-management.htm>

<https://www.findamasters.com/search/masters-degree/i338d834c4774/environmental-management-ma>



Environmental Management MS Programme Globally

Yale - Master of Environmental Management

Duke - Master of Environmental Management

University of California Santa Barbara - Master of Environmental Science and Management

Johns Hopkins University - Environmental Planning and Management

Monash - Environmental Management and Sustainability

Liverpool - Environmental Assessment and Management MSc

University of East Anglia - MSc Environmental Assessment and Management

University of San Francisco - MS in Environmental Management

Kingston University - Environmental Management BSc

Oxford University - MSc in Sustainable Urban Development



University of California, Santa Barbara

Master of Environmental Science and Management

ESM 201	Ecology of Managed Ecosystems	4 units
ESM 202	Environmental Biogeochemistry	4 units
ESM 203	Earth Systems Science	4 units
ESM 204	Economics of Environmental Management	4 units
ESM 206	Statistics & Data Analysis	4 units
ESM 207	Environmental Law & Policy	4 units
ESM 210	Business and the Environment	4 units
ESM 241	Environmental Politics and Policy	2 units
ESM 251	Economics & Environmental Policy Analysis	2 units
ESM 401/402	ABCDGroup Project or Eco-E Project	14 units total



Johns Hopkins Environmental Planning and Management

- 575.408 - Optimization Methods for Public Decision Making
- 575.411 - Economic Foundations for Public Decision Making
- 575.428 - Business Law for Engineers
- 575.435 - Environmental Law for Engineers and Scientists
- 575.437 - Environmental Impact Assessment
- 575.440 - Geographic Information Systems (GIS) and Remote Sensing for Environmental Applications
- 575.707 - Environmental Compliance Management
- 575.710 - Financing Environmental Projects
- 575.711 - Climate Change and Global Environmental Sustainability
- 575.714 - Water Resources Management
- 575.723 - Sustainable Development and Next-Generation Buildings
- 575.731 - Water Resources Planning
- 575.733 - Energy Planning and the Environment
- 575.734 - Smart Growth Strategies for Sustainable Urban Development and Revitalization
- 75.736 - Designing for Sustainability: Applying a Decision Framework
- 575.737 - Environmental Security with Applied Decision Analysis Tools
- 575.747 - Environmental Project Management
- 575.750 - Environmental Policy Needs in Developing Countries
- 575.752 - Environmental Justice and Ethics Incorporated into Environmental Decision Making
- 575.753 - Communication of Environmental Information and Stakeholder Engagement
- 575.759 - Environmental Policy Analysis
- 575.801 - Independent Project in Environmental Engineering, Science, and Management



The Specializations are

Business and the Environment

Ecosystem Conservation and Management

Energy and the Environment

Environmental Policy Analysis

Human Dimensions of Environmental Management

Sustainable Land Management, Use and Policy

Industrial Ecology and Green Design

Water Resources Science and Management



F&ES 725b Remote Sensing of Land Cover and Land Use Change
F&ES 726b Observing Earth from Space
F&ES 751b Sampling Methodology and Practice
F&ES 755b Modeling Geographic Space
F&ES 756a Modeling Geographic Objects
F&ES 659b Principles in Applied Ecology: The Practice of
Silviculture
F&ES 709a Soil Science
F&ES 712b Water Resource Management
F&ES 744b Conservation Science
F&ES 719a River Processes and Restoration
F&ES 774a Agriculture: Origins, Evolution and Crises
F&ES 581a Multifunctional Carbon- Sequestering Agroforestry
F&ES 723a Wetlands Ecology, Conservation, and Management
F&ES 819b Strategies for Land Conservation
F&ES 657b Managing Resources, spatial, strategic, technical and
operational
F&ES 788b Applied Urban Ecology
F&ES 680a Forest and Ecosystem Finance
F&ES 795b Nature as Capital

F&ES 802b Valuing the Environment
F&ES 578b Financial concepts for Environmental Managers
F&ES 826a Foundations of Natural Resource Policy and
Management
F&ES 831b Society and Natural Resources
F&ES 964b Large Scale Conservation
F&ES 837b Seminar on Leadership in Natural Resources and the
Environment
F&ES 855a Climate Change Mitigation in Urban Areas
F&ES 888a Ecological Urban Design
F&ES 788b Applied Urban Ecology
F&ES 817a Urban, Suburban, and Regional Planning Practice
F&ES 892a Introduction to Planning and Development
SOA 4011b Introduction to Urban Design
F&ES 775a Site Planning and Design for Sustainability
F&ES 820b Land Use Law and Environmental Planning
F&ES 854b Institutions and the Environment
F&ES 821b Private Investment and the Environment: Legal
Foundations and Tools



Environmental Management MS Programme at Saint Petersburg State University

- Started in 2008 as a TEMPUS project on «Improving Environmental Management Education» (1 mil Euro).
- Current entry competition 2017 - 99 applications for 25 places.
- Applicants 2017: 31% from Saint Petersburg , 64% other Russia, CIS countries 4%.



Environmental Management MS Programme at Saint Petersburg State University

Contemporary Challenges & Modernization Process

(in accordance with general requirements to educational programs in Russia)

- 1.** Labor Ministry - Professional Standards/Codes developed by professional associations
And/or
Requests by Employees
- 2.** Job requirements = the educational program's list of competences / learning outcomes
- 3.** list of competences / learning outcomes = modules, courses, etc.



Green Job Market - Russia

Менеджер-эколог

ЭКО ГРАНД, Москва

Продажа услуг компании по сбору, транспортированию и утилизации промышленных отходов с сопровождением и консультированием клиентов компании по вопросам экологического и санитарного законодательства.

Инженер-эколог

Труд-Центр, Москва

от 7 000 Р Должностные обязанности

Разработка разделов проектной документации: ПМООС, ООС, сокращение СЗЗ, акустические расчёты, согласование разработанной ПД в государственной/негосударственных экспертизах (снятие замечаний экспертов), в Роспотребнадзоре.

Преподаватель экологии, географии

Колледж Царицыно №37, Москва



Green Job Market - Russia

Эколог-проектировщик

ЭкоЭксперт, Москва от 45 000 до 75 000 Р

Разработка проектов ПНООЛР, ПДВ, СЗЗ, ОВОС и другой природоохранной документации, исправление замечаний согласующих органов.

Инженер по охране труда и экологии (неполная занятость)

Бизнес. Оптима, Москва до 40 000 Р

Регулярный мониторинг соответствия процессов, связанных с охраной труда, пожарной безопасностью и ГО и ЧС в компании, российскому законодательству и локально-нормативным актам компании; Разработка и реализация предложений по совершенствованию процессов компании...

Специалист по охране труда, экологии и качеству

Оказание услуг в сфере контроля качества для промышленных компаний, Москва

Оценка и управление профессиональными рисками; Участие в разработке и внедрении мероприятий по профилактике происшествий; Организация обучения и проверка знаний по ОТЭиК по согласованной и утвержденной программе; Предение вводных инструктажей по ОТЭиК; Организация...



Green Job Market - Russia

Эколог-проектировщик / Инженер-эколог

40 000-60 000 руб.

Санкт-Петербург, Чернышевская

Инженер - эколог

24 000-45 000 руб.

ООО Экологические услуги Санкт-Петербург

Эколог - проектировщик/Разработчик проектов

ООО ЭкоПромЦентр Санкт-Петербург,

Эколог-представитель региона

от 50 000 руб.

Эколог

от 30 000 руб.

АО НПО Тепломах Санкт-Петербург, Ладужская • 6 сентября

Менеджер-эколог

16 000-60 000 руб.

Экология Санкт-Петербурга



Green Job Market - Russia

Эколог-проектировщик / Инженер-эколог

Ведущий инженер-эколог

40 000-50 000 руб.

СПЭК, экологическая компания Санкт-Петербург

Инженер-эколог/инженер-химик

Специалист по охране труда и экологии

Версус Сервис Санкт-Петербург

Инженер-эколог

ООО СЗСК Санкт-Петербург

Специалист по охране труда и экологии

British American Tobacco Russia Санкт-Петербург

Директор по охране труда и экологии / Country EHS Director

Версус Сервис Санкт-Петербург

Ведущий инженер по охране труда, промышленной и экологической безопасности
от 45 000 руб.

ОАО Лентелефонстрой Санкт-Петербург

Руководитель отдела экологического проектирования

40 000-60 000 руб.

ООО Экология Производства Санкт-Петербург



Green Job Market - UK

Carbon, Climate & Energy

Energy & Projects Support Officer

University of the Arts London, King's Cross, London, £32,730 - £40,196

Energy Manager

Royal Botanic Gardens, Kew, Kew Gardens, Richmond, £38,334 - £42,550

Energy and Engineering Services Manager

Scottish Prison Service, Edinburgh, £32,778 - £41,269



Green Job Market - UK

Conservation & Wildlife

Ranger - Walthamstow Wetlands

London Wildlife Trust, Walthamstow, London, £20,431

Project Assistant

ZSL, Regent's Park, London, £26,272 - £27,249 (Inclusive of London Weighting)

Wellbeing through Nature Project Officer

Avon Wildlife Trust, Bristol, £17,000 - £21,000 pa



Green Job Market - UK

Ecology

Technical Manager (Environmental/Ecology)

McCarthy Keville O'Sullivan Ltd., Galway, Ireland

Senior Ecologist

McCarthy Keville O'Sullivan Ltd., Galway, Ireland

Biodiversity Officer

Stroud District Council, Stroud, Gloucestershire, £29,854 (pro-rata)



Green Job Market - UK

Environmental Education

Project Coordinator

Wiston Lodge, Wiston by Biggar, South Lanarkshire, £15,000 pa

Tutor

Field Studies Council, Slapton, Kingsbridge, Devon, £18,397 - £20,994

Woodland Learning Officers

Woodland Trust, Yorkshire, Hertfordshire & Durham, c.£23,000 pa

Student Support Manager

Centre for Alternative Technology, Machynlleth, Powys, £20,000 pa

Education Officer

Groundwork Cheshire Lancashire & Merseyside, Wigan, £16,867 - £20,049



Green Job Market - UK

Environmental Policy & Campaigning

Policy Officer

Soil Association, Bristol, £23,800 pa

Head of Policy

Soil Association, Bristol, £44,881 pa (or pro rata for part-time)

Constituency Coordinator and Researcher

The Green MEPS, Old St, London, £30,000 pa inclusive of London weighting

Officer, Ending Overfishing in Northwestern Europe

The Pew Charitable Trusts, Brussels, Belgium



Green Job Market Analysis/Conclusions

- Most attractive jobs in the environment are international ones.
- Mature job markets have more environmental jobs
- Mature job markets in developed countries have more sophisticated environmental jobs (innovations, etc)
- General competences / learning outcomes required: foreign language, interdisciplinary vision



Thank you for your attention!

Спасибо за внимание!