REPORT

Suggested Courseware Topics

2019

Adaptation Learning Network
INSPIRING CLIMATE ACTION
ROYAL ROADS UNIVERSITY
adaptationlearningnetwork.com

Inspiring Climate Action: Suggested Courseware Topics

Course Topic/Name	Theme	Area of Interest	Audience	Other Information
Climate Science & Future Projections	A. Basics & Tools	2. Profession-specific Knowledge	Engineers, Owners, Builders, Planners, Architects	- Insight into how climate data is collected and used to make informed decisions -using future projections as part of boundary contions calculations. Using appropriate climate projections to make adaptive buildings. More on template 19.
Intro to Climate Solutions & Technology	A. Basics & Tools	4. Cross-disciplinary Applications	All Professionals	- Includes Case Study - diverse group of professionals come together to apply solution regionally (place-based) developing risk-assessment, regulatory framework plus business case to implement given solution/technology. To support socia-ecological resilience.
Regionalizing Climate Plans	A. Basics & Tools	4. Cross-disciplinary Applications	All Professionals	- walk through assessment & planning exercise -regionally specific
Building Climate Capacity: Moving beyond hist. data & rules of thumb	A. Basics & Tools	5. Tools Training	All Professionals	- Thinking critically about data needs/sources. Translating climate science into planning & action, Climate literacy, sensitivity analysis. Need to be responsive as new data emerges. Risk assessment (ISO 3000 etc)
Intro to Climate Policy	A. Basics & Tools	7. Basics	All Professionals	- Overview of current climate policies at all levels (regional -> federal) - Current & Potential Policies & Regulations - and impacts on demand for climate adapatation services; Policy at local & senior gov. levels, Demand for prof. edu. derived from demand for services
Intro to Climate Change Risk Assessment	A. Basics & Tools	7. Basics	All Professionals	- CC is a modifier of existing risk - put a climate lens on existing risk assessment practices to prioritize CC vulnerabilities and then priortize adaptation measures
From Planning to Action: Org. Change for CC Adaptation	A. Basics & Tools	7. Basics	All Professionals	- Adaptive mgmt./action -comfort with ambiguity. Collab. leadership. Operationalizing CCA across depts./roles/orgs. Systems thinking. Muscles, mindsets & structures.
Intro to Climate Change Science	A. Basics & Tools	7. Basics	General	- Baseline info re: sci., impacts. Connects Mitigation & adaptation. PICS has a basic course. Climate Insights, VIU. Why is Adapatation necessary? What we can & can't measure. - How basic sciences interact to result in weather-related damage, food-chain effects, increased GHGs (How does Ocean ph affect sea life? Glacier melt impact ocean currents?) - K. Tyler is working on this (or sth. similar) with CCS. Wiling to help develop or lead. Basic Climate Science can be developed by PCIC. May have to be slightly diff. climate intro courses w/ components specific to each prof. group. How CC will affect decisions that I make? How will I inform those decisions - both from context & of regional climate sci. to assess my risk tolerance. - Foundational/ core course for all others in program. Intro to meteorology, climatology, processes for weather, links between oceans, atmosphere and land. Regional context.
Climate Resilient Designs for Highway Infrastructure in BC	B. Adaptation	1. Profession-specifc Applications (Adv.)	Engineers, local gov't staff, provinical gov't staff	- Understanding design philosophies & risk assessment methodologies to make better decisions -includes cliamte science related to engineering. Designing for resiliency and future sustainability.
Adaptation Planning for Populations at Risk	B. Adaptation	2. Profession-specific Knowledge	Community planners, policy makers, social planners, health sector	- Equity & climate justice -ensuring that our adaptation planning is inclusive of marginalized communities. Meaningfully engaging vulnerable populations (how impacts differ from general public)
Effective Governance for Socio-economic Resilience	B. Adaptation	2. Profession-specific Knowledge	Gov't, public sector and Proffesionals	- Regional goals, strategies, outcomes -effective policy for CC adaptation
Health Benefits of Nature-based Solutions	B. Adaptation	2. Profession-specific Knowledge	health, municipal staff, engineers, landscape architects, planners	- Inform planning that benefits human health while reducing emissions & supporting biodiversity

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Co-benefits of Ecosystem-based Adaptation	B. Adaptation	7. Basics	All Professionals	- Ecosystem based adaptations to extreme heat and flooding are emerging worldwide and have many co-benefits- crucial approach. SFU is interested. Plan colloaborative strategic eco-system-based responses on multiple scales.
Tools for Holistic Resilient Design	C. Communication & Engagement	3. Profession-specific Basics	Health sector, design sector, planners, policy makers	- creating healthy sustainable solutions with anticipated future climate. Charette based as an option. More details on course template 10
Ecosystems for the Future	C. Communication & Engagement	3. Profession-specific Basics	Landscape architects, planners, policy-makers, homeowners	- Novel ecosystems are becoming more relevant. Outcome: knowledge about impact of CC on ecosystems -recommended plants/trees for a region (drough-tolerant, adapts to soil conditions etc.)
Influencing Public Policy	C. Communication & Engagement	3. Profession-specific Basics	Public sector	- Policy drives change
Strategic Dialogue & Civic Engagment - Adaptation	C. Communication & Engagement	7. Basics	Professionals with internal & external stakeholder engagement	- Building relationships, with whom, creating processes that make people feel like they've been meaningfully consulted -they're invested & leads to effective outcomes - How & when to engage for different purposes (Inform, consult, collaborate, empower). More on coure template 29 (reverse).
Growing Resilient Forests	D. Ecology	3. Profession-specific Basics	Forestry, Agrology, Public, biologists	- Implement landscape and stand level stocking, healthy forests mitigate risks (fire, pests, disease)
Ecological Restoration	D. Ecology	7. Basics	All Professionals	- Knowledge across sciences, enviro. eng., enagagement w/ comm. partners. Addresses damage from resource extraction/extreme weather (by CC). CapU Biol. interested - Curriculum proposed: 1) Climate science -> 2) resileince & restoration 3) regional downscaling 4) socio-economics (contd... on template 33) - more on course template 43
Ecological Economics	D. Ecology	7. Basics	All Professionals	- Aligns with ecosystem services, contradicts traditional economic growth models based on infinite resources. CapU Business interested.
Infrastructure Risk Assessment & Planning	E. Risk	1. Profession-specifc Applications (Adv.)	Engineers, planners, landscape architects, accountants, ecologists (natural assets)	- Beyond PIEVC - need broader persepctive to understand/manage risks holistically. Plans that are meanignfully integrated into capital/operational plans.
Adaptation & Risk	E. Risk	2. Profession-specific Knowledge	Finance Professionals, Economists, Accountants	- Developing Risk Assessments (Including vulnerability) - Consequence scales -which categories, temporal scale
Climate Change & Business Decisions	F. Economics	2. Profession-specific Knowledge	Business Professionals, Mid- to Senior Management	- economic modelling and why we must act
How the Insurance Bureau of Can. thinks about Climate Change	F. Economics	6. Case Studies	Finance Professionals, Economists, Accountants	- IBCs expertise in thinking about risks - evaluating/predicitng. Sharing IBC knowledge. More details on course template 9
Inspiring Climate Action in Indigeneous Communities	H. Indigenous	3. Profession-specific Basics	Hunters, fishers, tradtional knowledge keepers	- How to work with engineers, agrologists etc.

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Traditional Knowledge & Climate Change	H. Indigenous	7. Basics	All Professionals	- Understanding social and ecological systems - Systemic & holistic approach, include indigenous perspectives. Human impact on ecol. systems. Similarities b/w indigenous perspectives & systemic approach. - Basic Pre-req for other learning. Professional Governence Act. Protocols for working with indigenous communities
Hidden Treasures: Curating community resources for resilience	I. Resilience	1. Profession-specifc Applications (Adv.)	City & Regional Managers, community service org leaders/facilitators	- human resources that provide & plan for emergency responses -develop community awareness, volunteerism. 1) Human resource inventory 2) organizational development 3) funding & other resources 4) use of case examples...
Mobilizing Building Adaptation & Resilience	I. Resilience	1. Profession-specifc Applications (Adv.)	Construction industry, engineers, building officials	- Comprehensive look at approaches to achieve low-carbon resilience. BC Energy step code etc. aproaches to build adaptation resiliency & improve disaster resilience (flood, fire, drought).
Regenerative Agriculture: Food systems & climate resilience	I. Resilience	2. Profession-specific Knowledge	Agrologists, Ecologists, planners, policy-makers, landscape architects, Local/provinical gov't	- Online w/ on-site tours of farms implementing regenerative practices. Climate impacts of conventional ag., water-management etc. More details on course template 8
Development/ Technology into the Environment	I. Resilience	4. Cross-disciplinary Applications	Engineering, architects, planners - multipdisciplinary	- Having technical community aware of the environmental, positive & negative impacts... working in multi-disciplinary groups -to develop a common interest -creating resiliency with the environment... (more on template 41)
Rebuilding the Community: Case studies of disaster response	I. Resilience	6. Case Studies	Regional Govt	- role of non-traditional assets in disaster resilience. Comparing local case studies and international. Roles of military, emergency response teams included.
Regional Food Systems	I. Resilience	7. Basics	All Professionals	- Food security - development of small-scale regional projects
Legislated Flood Assessments in a Changing Climate	J. Other Theme	1. Profession-specifc Applications (Adv.)	Engineers & Local Gov't	- How are joint probabilistic assessments conducted? Design flood elevations set? restrictive covenents developed -undertasning services engineers can provide... (more on template 15)
Wildfire Risk Mitigation	J. Other Theme	1. Profession-specifc Applications (Adv.)	Public, forestry, biology	- fuel treatments, prescribed fire -ensure public health and safety
Climate Change & Human Health	J. Other Theme	4. Cross-disciplinary Applications	All Professionals	- Understand impacts of CC on human health - tight link between the two. Awareness of globalization, human migration, spread of diseases, species
Natural Asset Management	J. Other Theme	7. Basics	All Professionals	- Role of natural assets in climate adapatation, resiliency. How to protect & enhance. Understanding their professional role in CC adaptation of sustainable service delivery. - more on course template 43
Cradle to Grave to Recycle to Reincarnation...	J. Other Theme	9. Other Interest	All Professionals	- there is so much focus on fossil fuels that there is significant list of other design components that do not readily consider the health, safety, and environmental impacts of everyday items