Think Resilience online course overview

We live in a time of tremendous political, environmental, and economic upheaval.

What should we do?

Think Resilience is an online course offered by Post Carbon Institute to help you get started on **doing something**. It features twenty-two video lectures—about four hours total—by Richard Heinberg, one of the world's foremost experts on the urgency and challenges of transitioning society away from fossil fuels.

Think Resilience is rooted in Post Carbon Institute's years of work in energy literacy and community resilience. It packs a lot of information into four hours, and by the end of the course you'll have good start on two important skills:

1. **How to make sense of the complex challenges society now faces.** What are the underlying, systemic forces at play? What brought us to this place? Acting without this understanding is like putting a bandage on a life-threatening injury.

2. **How to build community resilience.** While we must also act in our individual lives and as national and global citizens, building the resilience of our communities is an essential response to the 21st century's multiple sustainability crises.

The course is offered in two ways: as a **self-directed** course that you can start at any time and take at your own pace, and as a periodically offered six-week **guided** course featuring group webinars with Richard Heinberg. Students can qualify to earn a Certificate of Course Completion from Post Carbon Institute. Discussion groups and classroom use are also supported.

Learn more about *Think Resilience* and register at education.resilience.org.

Sessions, lessons, and video times

Session	Lesson	Video Time	Session Time
I. Our Converging Crises	Lesson 1- Introduction	5:44	
	Lesson 2- Energy	12:18	
	Lesson 3- Population & Consumption	12:22	
	Lesson 4- Depletion	12:24	
	Lesson 5- Pollution	8:52	**51:00**
II. The Roots and Results of Our Crises	Lesson 6- Political & Economic Management	10:48	
	Lesson 7- Belief Systems	8:02	
	Lesson 8- Biodiversity	7:16	
	Lesson 9- Collapse	8:48	**34:54**
III. Making Change	Lesson 10- Thinking in Systems	10:12	
	Lesson 11- Shifting Cultural Stories	12:09	
	Lesson 12- Culture Change & Neuroscience	11:21	**33:42**
IV. Resilience Thinking	Lesson 13- What is Resilience?	12:18	
	Lesson 14- Community Resilience in the 21st Century	11:49	
	Lesson 15- Six Foundations for Building Community Resilience	15:11	**39:18**
V. Economy and Society	Lesson 16- How Globalization Undermines Resilience	12:16	
	Lesson 17- Economic Relocalization	10:29	
	Lesson 18- Social Justice	12:00	
	Lesson 19- Education	7:47	**42:32**
VI. Basic Needs and Functions	Lesson 20- Meeting Essential Community Needs	12:35	
	Lesson 21- Resilience in Major Sectors	18:54	
	Lesson 22- Review, Assessment & Action	8:02	**39:31**

The total viewing time of all the videos in the course is about four hours.

Session I. Our Converging Crises

Lesson 1. Introduction

An overview of the *Think Resilience* course.

Lesson 2. Energy

Energy is key to everything—it's an essential driver of the natural world and of the human world, and it will also be pivotal to the societal transformations we'll be experiencing in the 21st century and beyond.

Lesson 3. Population and Consumption

Human impact on the environment results not just from population size, and not just from the per capita rate of consumption, but from both together. In this video we explore how adoption of tools, language, agriculture, and most especially fossil fuels allowed humans to temporarily overcome the carrying capacity of the planet to support our growing population and consumption, and why those trends can no longer continue.

Lesson 4. Depletion

Depletion is an inescapable fact of life: As soon as you've taken one sip of your coffee, or one bite of ice cream, you've begun to deplete that resource. Economists will tell you, "No problem. You can just run to the store and buy more, or find something else just as good as a substitute." But does that work on a finite planet, and are all resources so easily substitutable?

Lesson 5. Pollution

In nature, waste from one organism is food for another. However, that principle sometimes breaks down and waste becomes poison. Humans aren't the only possible sources of environmental pollution. But these days the vast majority of pollution does come from human activities. That's because we humans are able to use energy and tools to extract, transform, use, and discard natural resources, producing wastes of many kinds and in ever-larger quantities.

Session II. The Roots and Results of Our Crises

Lesson 6. Political & Economic Management

Every society has institutions for making decisions and allocating resources. Some anthropologists call this the *structure* of society. Every society also has an *infrastructure*, which is its means of obtaining food, energy, and materials. Finally, every society also has a *superstructure*, which consists of the beliefs and rituals that supply the society with a sense of meaning. In this lesson we see how our current systems of political and economic management—our social structure—evolved to fit with our fossil-fueled infrastructure, and we'll very briefly explore what a shift to different energy sources might mean for the politics and economics of future societies.

Lesson 7. Belief Systems

Every human society has a shared set of beliefs to encourage cooperative behavior. These beliefs may be religious or secular in nature. In either case, they provide what many anthropologists call the *superstructure* of society. Modern industrial society features the pervasive belief in inevitable material progress and economic growth—a superstructure very much suited to our particular, fossil-fueled *infrastructure*.

Lesson 8. Biodiversity

As our human populations and consumption habits have grown, our destructive land use practices and environmentally harmful pollution have wiped out countless ecosystems around the world. As a result, the numbers of species of insects, fish, amphibians, birds, and mammals are declining—everywhere. Biologists call this widespread, rapid loss of biodiversity the Sixth Extinction, and some Earth scientists say we are creating a new era in Earth's history: the Anthropocene.

Lesson 9. Collapse

Historians have long noted that civilizations appear to pass through cycles of expansion and decline. Underlying the factors that appear to contribute to the collapse of civilizations, there may be a deeper dynamic: the relationship between the ability of a society to solve problems and the amount of energy it has available to do work. Unfortunately, most energy production activities are subject to the law of diminishing returns. At what stage in the cycle of expansion and decline might our own civilization find itself today?

Session III. Making Change

Lesson 10. Thinking in Systems

The interrelated crises of the twenty-first century can't be solved with simple technical adjustments. Understanding and responding to them intelligently requires us to think systemically. All systems have: boundaries, inputs, outputs, information flows from and to the surrounding environment, and feedbacks. Systems thinking recognizes the roles of these components, and tries to identify leverage points where small shifts in one thing can produce big shifts in everything. The "shock doctrine" (Naomi Klein) and the theory of the "diffusion of innovations" (Everett Rogers) are two examples of using systems thinking to understand how big changes happen in modern society.

Lesson 11. Shifting Cultural Stories

Society's goals and mindsets could be thought of as the stories we tell ourselves. Some cultural stories are deeply ingrained in us as a species, while some are the predominant narratives of the particular society into which we have been born. They help us make sense of the world around us, but they may also hinder our ability to foresee big social changes and to adjust our behavior accordingly. Therefore, some of these stories need to change: we may need to shift from the consumer economy to a conserver economy; from valuing things to valuing relationships and experiences; from inevitable growth to a steady-state economy; from a politics of mass persuasion to a politics of local engagement.

Lesson 12. Culture Change & Neuroscience

If we want to adapt successfully to a future of less energy per capita, and little or no economic growth, we need to better manage some of the neurological traits that served our evolutionary forebears but are ill-suited to the modern world. Consumerism is a modern version of our biological drives for status-seeking and novelty-seeking, and makes use of how our brain chemistry develops addictions. We also have an innate tendency to give more weight to present threats and opportunities than to future ones; this is called *discounting the future*, and it makes it hard to sacrifice now to overcome an enormous future risk such as climate change. Fortunately we also have some inherited neurological tendencies that would be useful to encourage, like cooperation, empathy, and altruism.

Session IV. Resilience Thinking

Lesson 13. What is Resilience?

In ecology, resilience is seen as the ability of a system to absorb disturbance and still retain its basic function and structure. In other words, a system that's resilient can adapt to change without losing the qualities that define what it is and what it does—which together comprise that system's "identity." Resilience boils down to an ability to adapt to both short-term disruption and long-term change while retaining the system's essential identity. Building resilience starts with decisions about what we value about a system. Concepts like the adaptive cycle and panarchy further aid our understanding of resilience in systems.

Lesson 14. Community Resilience in the 21st Century

This lesson brings resilience into the context of this century's simmering and complex "E^4" crises, with (1) ecological, (2) energy, (3) economic, and (4) equity dimensions. It clarifies the relationship between sustainability and resilience, and shows why a lot of the climate change resilience discussion—while necessary—doesn't go far enough. And it explains why this course focuses primarily on building resilience at the community level, as opposed to the global, national, or household level.

Lesson 15. Six Foundations for Building Community Resilience

In 2015, Post Carbon Institute surveyed the academic literature on resilience and talked to scholars, activists, and local leaders around the country to determine how the concepts of resilience might be most usefully applied in communities by people who aren't resilience scientists. We found an easily understood framework that speaks directly to the challenges communities face regarding equity, group decision-making, and their complex social and economic contexts. We identified six foundations that appear necessary for community resilience-building efforts to be successful. And these are: people, systems thinking, adaptability, transformability, sustainability, and courage.

Session V. Economy and Society

Lesson 16. How Globalization Undermines Resilience

Globalization is largely about the relentless pursuit of economic efficiency. And while there are benefits to efficiency (increasing profits, minimizing waste), as an economic strategy it has serious costs to community resilience. Wealthier countries lose jobs for higher-paid wage laborers, as well as the skill base and the infrastructure to produce goods and equipment. The offshoring of manufacturing to poorer nations reduces domestic pollution but increases pollution in the exporting nations (which often have less stringent regulations). Economic inequality increases, both within nations and between nations. And as regions specialize, there is an overall loss of local diversity in jobs.

Lesson 17. Economic Relocalization

The local challenges created by globalization can be partly countered by economic localization. It starts with communities supporting local business rather than giving subsidies such as tax breaks and free utility hook-ups to large, non-local businesses, as is so often done. In fact, half of all private-sector U.S. jobs are still provided by small businesses, and almost all of these businesses are local. Moreover, local dollars have a multiplier effect—when spent within the regional economy, they increase local wealth, local taxes, jobs, charitable contributions, tourism, and entrepreneurship. Local economic development benefits everyone—except maybe big multinational corporations.

Lesson 18. Social Justice

Systemic inequality reduces the sustainability and resilience of society as a whole. Capital tends to reproduce itself and become more consolidated and centralized over time—that's its purpose—but only some members of society are motivated or able to set aside money and goods for the purpose of capital accumulation. Inequality is also created, sustained, and worsened over time through institutionalized racism, which results in chronic conditions of poverty and lack of access. Ultimately, promoting equity will require strategies like cooperative ownership of business and expanding the commons—the cultural and natural resources that should be accessible to all members of a society, and not privately owned.

Lesson 19. Education

Education—particularly early-childhood education—not only sets the foundation for who we become in later life, but also shapes society as a whole. If we want a more resilient society and more resilient communities, we have to plant the seeds today in students both young and old. We need education that trains people in both community and personal resilience-building.

Session VI. Basic Needs and Functions

Lessons to complete before this session

Lesson 20. Meeting Essential Community Needs

Building community resilience ultimately has to come to grips with the infrastructure that enables any community to function. This lesson looks at *food*, *water*, *energy*, and *money* systems, and how these can be made more resilient. If any one of these essentials goes haywire, a community loses its support capacity very quickly.

Lesson 21. Resilience in Major Sectors

Manufacturing, *transportation*, and *buildings* use energy to provide goods and services; transforming these sectors will entail finding ways to use less energy for these purposes, ways to use it that suit renewable energy sources, and ways to provide for human needs while using fewer material resources and producing less pollution. *Land use planning* touches on every aspect of local government concern, involving decisions on air quality, water quality, biodiversity, transportation options, economic vitality, and quality of life. And sound *public policy* is essential to community resilience efforts—with the recognition that imposing policies from above without adequate understanding of, or support for, those policies from community members will lead to political failure.

Lesson 22. Review, Assessment, and Action

If you want to apply what you have learned in this course, one way to do so might be to design and implement a *community resilience assessment*. Why an assessment? It's important to understand a system as much as possible before intervening in it.

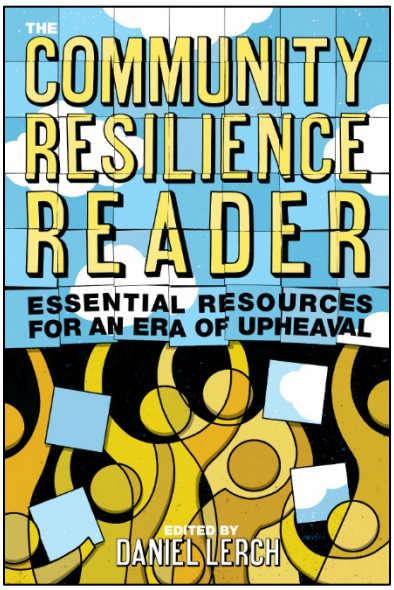
For further learning…

Want more? Dive into Post Carbon Institute's newest book on resilience:

The Community Resilience Reader

Essential Resources for an Era of Upheaval

Edited by Daniel Lerch. Published by Island Press, 2017.



The sustainability challenges of yesterday have become today's resilience crises.

National and global efforts have failed to stop climate change, transition from fossil fuels, and reduce inequality. We must now confront these and other increasingly complex problems by building resilience at the community level. But what does that mean in practice, and how can it be done in a way that's effective and equitable?

The Community Resilience Reader offers a new vision for creating resilience, through essays by leaders in such varied fields as science, policy, community building, and urban design. It combines a fresh look at the challenges humanity faces in the 21st century, the essential tools of resilience science, and the wisdom of activists, scholars, and analysts working with community issues on the ground. It shows how resilience is a process, not a goal; how resilience requires learning to adapt but also preparing to transform; and that resilience starts and ends with the people living in a community. Despite the challenges we face, *The Community Resilience Reader* shows that building strength and resilience at the community level is not only crucial, but possible.

Learn more at http://postcarbon.org/resilience.

About course host Richard Heinberg

Richard Heinberg is Senior Fellow-in-Residence at Post Carbon Institute. He is the author of thirteen books, including some of the seminal works on society's current energy and environmental sustainability crisis. He has authored scores of essays and articles that have appeared in such venues as *Nature*, *The Wall Street Journal*, *Yes!*, and *Reuters*. Richard has delivered hundreds of lectures on energy and climate issues to audiences in 14 countries, and has appeared in many film and television documentaries.

About course producers Post Carbon Institute

Post Carbon Institute is a non-profit organization based in the United States. Our mission is to lead the transition to a more resilient, equitable, and sustainable world by providing individuals and communities with the resources needed to understand and respond to the interrelated ecological, economic, energy, and equity crises of the 21st century. Learn more at postcarbon.org.

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