

Economics Department
Faculty of Social Sciences

ECONOMICS OF NATURAL RESOURCES

ECO 6143

[Louis Hotte](#)

Winter 2022 (COVID – on line and bimodal)

COURSE OUTLINE

Class schedule: Wednesday, 2:30PM-5:20PM (on line – real time)

Professor's office hours: Tuesday, 10:00AM-noon

E-mail: louis.hotte@uOttawa.ca

OFFICIAL COURSE DESCRIPTION

The concept of scarcity rents in static and dynamic settings. Basic property regimes: open access, exclusive access, and common property. Policy instruments. The importance of transaction costs. General-equilibrium and political-economic aspects of property regimes. Conflict. Elements of dynamic optimization. Renewable and non-renewable resources.

Description and Objectives

The first objective of this course is to help students understand why natural resources are often misused. To this end, we introduce the concepts of rents and property rights as fundamental determinants of conflict and cooperation over resource use. This leads us to discuss the importance of transaction costs in explaining the success or failure of institutions. The approach intends to be relevant for both developed and developing economies, as well as historical accounts.

We begin by pinning down user incentives responsible for inefficient resource use. We then look at factors that may impede actions to redress the situation at either the community or state levels. This approach builds on the interplay between rule adoption, economic behavior and transaction costs. For this reason, game theory provides us with powerful analytical tools. Political-economic issues of cooperation, conflict and redistribution are recurrent themes.

We initially consider static models of resource use under simple institutional arrangements. This approach helps apprehend the fundamental role played by institutions, and some policy implications. Dynamic stock-flow models of natural-resource use are then introduced with elements of dynamic optimization methods and financial concepts. More sophisticated institutional arrangements are also discussed. We consider explicitly the cases of fisheries and non-renewable resources, such as minerals and oil deposits.

Evaluation

The evaluation will be based on the following, for a total of 100 points to accumulate:

- Two mid-term **oral** examinations (15 points each) to take place during the **week of February 1st** and the **week of March 29th** using Zoom or Teams with audio and video. Regular classes will not take place during that week. (Absences are subject to the same rules as per the written mid-term examinations.)
- A term paper (50 points) due **April 25th, 2022**. (2 points will be removed for each day late.)
- Weekly assignments for a total of about 8 or 9 (20 points total). You can miss one assignment submission without penalty. No late submission is allowed since solutions will be posted.

The course will be taught in real time every week. (On-line only during the month of January and, if allowed, in hybrid mode starting the 1st week of February.) Students are highly encouraged to participate in real time. For those who cannot, recordings will be made available for up to **three days** after the class is taught, as everyone is expected to be up to date with the weekly material.

The oral examinations will be based on the material covered in the previous classes, the assigned readings, as well as the assignments. They will last a maximum of 15 minutes

each and will take place individually between the professor and the student, using Zoom or Teams.

Details regarding the term paper will be provided during the second week of classes. It will involve an empirical investigation using STATA, and possibly some simulations of a model using GAMS.

Although a course in natural-resource economics can be somewhat technical, it remains a course in economics as a **social science**. Much emphasis is thus put on interpreting the results and discussing their implications for society and economic policy. **The evaluation will always reflect this.**

The ability to interpret and discuss results can only be properly achieved through long-term maturation of ideas. Students are thus expected to be up-to-date in their weekly material. To this end, exercises and readings will be assigned weekly. An **individual and hand-written** copy of the answers to exercises is to be submitted by email the following week, **before the class begins**. Detailed solutions will then be posted but individual copies will not be corrected in detail. I will look only at honest attempts to solve and interpret the problems.

THEMES¹

1. Week 1

- a) Introduction
- b) What makes natural resources different? (**read** Hotte 2013, pp. 161 to 163.)
 - The concepts of appropriability and nonreplicability.
- c) Natural resources and scarcity rents
 - Locational land rent (Hartwick and Olewiler 1998, ch 3)
 - Dynamic rents: A two-period non-renewable resource extraction problem
- d) **Review:** Elements of game theory
This review is to be done by yourself. It is especially important for those who have done little game theory before. Students are invited to go over chapter 15 of Varian (1992), especially sections 1 to 4 in the first week of classes.

2. Week 2

- a) Presentation about term paper.
 - *Does International Trade Cause Overfishing?* (Erhardt 2018)
 - *Credit Market Development and Resource Extraction under Insecure Property Rights: Evidence from Global Fisheries* (Noack and Costello 2020)

¹Themes, readings, references, and their timing are subject to change, especially given the exceptional online format. Reasonable flexibility is expected from all.

- Other relevant references: Assunçao et al. (2020); Anderson (2017); McWhinnie (2009); Agnew et al. (2009); Sumaila et al. (2007); Costello et al. (2008); Brander and Taylor (1997); Cull and Morduch (2018);
- b) Basic property regimes: Exclusive property and free access (Cheung 1970) (Gordon 1954, Hardin 1968) (Dasgupta and Heal 1979, ch 3)(Eggertsson 1990, chap 4)(Hartwick and Olewiler 1998, ch 3)(Smith 1968, Brooks, Murray, Salant and Weise 1999, Hardin 1968)
- The open access problem in simple form (**read** Gordon (1954))
 - Free access with 2 users: The two-herder model
 - The property rights solution
3. Week 3
- a) Presentation of an empirical paper: *End-of-conflict deforestation: Evidence from Colombia's peace agreement* (Prem, Saavedra and Vargas 2020)
- b) Basic property regimes (continued)
- Free access with multiple users (Cheung 1970)(Dasgupta and Heal 1979, ch 3)
- c) The pigovian tax solution to the free access problem
- The smoking factory example (Coase 1960)
 - The multiple user pasture example
- d) The Coase theorem and transaction costs (Coase, 1960; Coleman, 1990, chap. 3)
- The negotiated solution in the smoking factory example (Coase 1960)
 - Transaction costs: The airport with night flights example
 - Pigovian taxation, property rights and transaction costs
4. Week 4
- a) mid-term 1: oral examination (15 minutes each maximum)
5. Week 5
- a) Anti-commons: Property rights as exclusion (Buchanan and Yoon 2000, Heller 1998, Alchian and Demsetz 1973)
- b) General equilibrium and property regimes (Cohen and Weitzman 1975)(Weitzman 1974) (Samuelson 1974, de Meza and Gould 1992)
- The fixed-factors model (**read** Cohen and Weitzman (1975))
 - Political-economic consideration of resource privatisation in general equilibrium
 - Privatization with transaction costs in general equilibrium
6. Week 6
- a) The dynamics of a renewable resources

- A bio-economic model of a fishery (Perman, Ma, McGilvray and Common 2003, Karp 2017)
- The industry supply curve (Copes 1970, Hartwick and Olewiler 1998)

7. Week 7

- Fishery dynamics and the discount rate
- Review:** Elements of capital theory (Hanley, Shogren and White 1997, ch 7)(Clark 1976, chapter 3)(Nicholson 1992, chapter 24)
- Fishery dynamics and present-value maximizing in discrete time (Hartwick and Olewiler 1998, Perman et al. 2003, Karp 2017)

8. Week 8

- Extracting a non-renewable resource (Perman et al. 2003, Gaudet 2007, Hartwick and Olewiler 1998, Karp 2017, Hotelling 1931)
 - A basic two-period model
 - The T-period problem in discrete time
 - Continuous-time analysis

9. Week 9

- Trade, natural resources and property rights(Hotte, Long and Tian 2000)(Pethig 1976, Chichilnisky 1994)(Margolis and Shogren 2009)(Garfinkel, Skaperdas and Syropoulos 2008)(Hotte 2013) (Copeland and Taylor 2009)(Brander and Taylor 1998)
 - Trade and open access in the resource sector
 - Trade and endogenous property rights (**read** Hotte 2000)

10. Week 10

- Commodities trade and conflict
 - An empirical application to the civil war in Colombia (read Dube and Vargas 2013)
- Resource privatization in general equilibrium with mobile capital (Congar and Hotte 2014; Manning, Taylor, and Wilen 2018)

11. Week 11

- mid-term 2: oral examination (15 minutes each maximum)

12. Week 12

- Topics on property rights
 - Conflict, state presence and natural-resource use (read Hotte (2001))
 - Theft versus trespass as different manifestation of property right issues (Hotte, McFerrin and Wills 2013)

References

- Agnew, David J., John Pearce, Ganapathiraju Pramod, Tom Peatman, Reg Watson, John R. Beddington, and Tony J. Pitcher (2009) ‘Estimating the worldwide extent of illegal fishing.’ *PLoS One* 4(2), 1–8
- Alchian, Armen A., and Harold Demsetz (1973) ‘The property right paradigm.’ *Journal of Economic History* 33(1), 16–27
- Andersen, Dana C. (2017) ‘Do credit constraints favor dirty production? theory and plant-level evidence.’ *Journal of Environmental Economics and Management* 84, 189–208
- Assuncao, Juliano, Clarissa Gandour, Romero Rocha, and Rudi Rocha (2020) ‘The effect of rural credit on deforestation: Evidence from the Brazilian Amazon.’ *The Economic Journal* 130(626), 290–330
- Brander, James A., and M. Scott Taylor (1997) ‘International trade between consumer and conservationist countries.’ *Resource and Energy Economics* 19, 267–297
- (1998) ‘Open access renewable resources: Trade and trade policy in a two-country model.’ *Journal of International Economics* 44, 181–209
- Brooks, Robin, Michael Murray, Stephen Salant, and Jill C. Weise (1999) ‘When is the standard analysis of common property extraction under free access correct? a game-theoretic justification for non-game-theoretic analyses.’ *Journal of Political Economy* 107(4), 843–858
- Buchanan, James M., and Yong J. Yoon (2000) ‘Symmetric tragedies: Commons and anti-commons.’ *Journal of Law and Economics* XLIII, 1–13
- Cheung, Steven N. S. (1970) ‘The structure of a contract and the theory of a non-exclusive resource.’ *Journal of Law and Economics* XIII, 45–70
- Chichilnisky, Graciela (1994) ‘North-south trade and the global environment.’ *The American Economic Review* 84(4), 851–874
- Clark, C.W. (1976) *Mathematical Bioeconomics* (John Wiley)
- Coase, R. H. (1960) ‘The problem of social cost.’ *The Journal of Law and Economics* III, 1–44
- Cohen, Jon S., and Martin L. Weitzman (1975) ‘A Marxian model of enclosures.’ *Journal of Development Economics* 1, 287–336
- Coleman, James S. (1990) *Foundations of Social Theory* (Cambridge, Mass., USA: The Belknap Press of Harvard University Press)
- Congar, Ronan, and Louis Hotte (2014) ‘Open access vs. restricted access with two variable factors: On the redistributive effects of a property regime change.’ Working Paper 1406E, University of Ottawa

- Copeland, Brian R., and M. Scott Taylor (2009) 'Trade, tragedy, and the commons.' *American Economic Review* 99, 725–49
- Copes, Parzival (1970) 'The backward-bending supply curve of the fishing industry.' *Scottish Journal of Political Economy* 17, 69–77
- Costello, Christopher, Steven D. Gaines, and John Lynham (2008) 'Can catch shares prevent fisheries collapse?' *Science* 321(5896), 1678–1681
- Cull, Robert, and Jonathan Morduch (2018) 'Microfinance and economic development.' In *Handbook of Finance and Development*, ed. Thorsten Beck and Ross Levine (Edward Elgar Publishing) chapter 20, pp. 550–572
- Dasgupta, P. S., and G. M. Heal (1979) *Economic Theory and Exhaustible Resources* (Wiley, England: James Nisbet and Co. Ltd and Cambridge University Press)
- de Meza, David, and J.R. Gould (1992) 'The social efficiency of private decisions to enforce property rights.' *Journal of Political Economy* 100(3), 561–580
- Dube, Oeindrila, and Juan Vargas (2013) 'Commodity price shocks and civil conflict: Evidence from colombia.' *Review of Economic Studies*
- Eggertsson, Thrainn (1990) *Economic Behavior and Institutions* Cambridge Surveys of Economic Literature (Cambridge: Cambridge University Press)
- Erhardt, Tobias (2018) 'Does international trade cause overfishing?' *Journal of the Association of Environmental and Resource Economics* 5(4), 695–711
- Garfinkel, Michelle R., Stergios Skaperdas, and Constantinos Syropoulos (2008) 'Globalization and domestic conflict.' *Journal of International Economics* 76, 296–308
- Gaudet, Gérard (2007) 'Natural resource economics under the rule of hotelling.' *Canadian Journal of Economics* 40(4), 1033–1059
- Gordon, H. Scott (1954) 'The economic theory of a common-property resource: The fishery.' *Journal of Political Economy* LXII, 124–142
- Hanley, Nick, Jason F. Shogren, and Ben White (1997) *Environmental Economics: In Theory and Practice* (New York, USA: Oxford University Press)
- Hardin, Garrett (1968) 'The tragedy of the commons.' *Science* 162, 1243–1248
- Hartwick, John M., and Nancy D. Olewiler (1998) *The Economics of Natural Resource Use*, 2 ed. (Reading, Mass.: Addison-Wesley)
- Heller, Michael A. (1998) 'The tragedy of the anticommons.' *Harvard Law Review* pp. 622–688

- Hotelling, Harold (1931) ‘The economics of exhaustible resources.’ *The Journal of Political Economy* 39, 137–175
- Hotte, Louis (2001) ‘Conflicts over property rights and natural-resource exploitation at the frontier.’ *Journal of Development Economics* 66, 1–21
- (2013) ‘Environmental conflict and natural resources.’ In *Encyclopedia of Energy, Natural Resources and Environmental Economics*, ed. Jason Shogren (Oxford: Elsevier Science) pp. 261–270
- Hotte, Louis, Ngo Van Long, and Huilan Tian (2000) ‘International trade with endogenous enforcement of property rights.’ *Journal of Development Economics* 62, 25–54
- Hotte, Louis, Randy McFerrin, and Doug Wills (2013) ‘On the dual nature of weak property rights.’ *Resource and Energy Economics* 35(4), 659–678
- Karp, Larry (2017) *Natural Resources as Capital* (Cambridge, MA: MIT Press)
- Manning, Dale T., J. Edward Taylor, and James E. Wilen (2018) ‘General equilibrium tragedy of the commons.’ *Environmental and Resource Economics* 69, 75–101
- Margolis, Michael, and Jason F. Shogren (2009) ‘Endogenous enclosure in north-south trade.’ *Canadian Journal of Economics* 42, 866–881
- McWhinnie, Stephanie F. (2009) ‘The tragedy of the commons in international fisheries: An empirical examination.’ *Journal of Environmental Economics and Management* 57, 321–333
- Nicholson, Walter (1992) *Microeconomic Theory: Basic Principles and Extensions*, fifth ed. (Dryden)
- Noack, Frederik, and Christopher Costello (2020) ‘Credit market development and resource extraction under insecure property rights: Evidence from global fisheries.’ Working Paper
- Perman, Roger, Yue Ma, James McGilvray, and Michael Common (2003) *Natural Resource and Environmental Economics*, third ed. (Harlow, U.K.: Pearson Education Limited)
- Pethig, R. (1976) ‘Pollution, welfare, and environmental policy in the theory of comparative advantage.’ *Journal of Environmental Economics and Management* 2, 160–169
- Prem, Mounu, Santiago Saavedra, and Juan F. Vargas (2020) ‘End-of-conflict deforestation: Evidence from colombia’s peace agreement.’ *World Development* 129, 104852
- Samuelson, Paul A. (1974) ‘Is the rent-collector worthy of his full hire?’ *Eastern Economic Journal* pp. 7–10
- Smith, Vernon L. (1968) ‘Economics of production from natural resources.’ *American Economic Review* 56, 409–31

- Sumaila, U. Rashid, A. Dale Marsden, Reg Watson, and Daniel Pauly (2007) 'A global ex-vessel fish price database: Construction and applications.' *Journal of Bioeconomics* 9, 39–51
- Varian, Hal R. (1992) *Microeconomic analysis*, third ed. (New York: W. W. Norton and Company)
- Weitzman, Martin L. (1974) 'Free access vs private ownership as alternative systems for managing common property.' *Journal of Economic Theory* 8, 225–234

INDIGENOUS AFFIRMATION

ANISHNABE

Ni manàdjiyànànig Màmìwininì Anishinàbeg, ogor kà nàgadawàbandadjig iyo akì eko weshkad. Ako nongom ega wikàd kì mìgiwewàdj.

Ni manàdjiyànànig kakina Anishinàbeg ondaje kaye ogor kakina eniyagizidjig enigokamigàg Kanadàng eji ondàpinangig endàwàdjìn Odàwàng.

Ninisidawinawànànig kenawendamòdjig kije kikenindamàwin; weshkinìgidjig kaye kejejàdizidjig. Nigijeweninmànànig ogor kà nigànì sòngideyedjig; weshkad, nongom; kaye àyànikàdj.

[Listen to the audio file](#)

ENGLISH

We pay respect to the Algonquin people, who are the traditional guardians of this land. We acknowledge their longstanding relationship with this territory, which remains unceded. We pay respect to all Indigenous people in this region, from all nations across Canada, who call Ottawa home.

We acknowledge the traditional knowledge keepers, both young and old.

And we honour their courageous leaders: past, present, and future.

INCLUSION

The Faculty of social sciences aims to be an equitable and inclusive institution, actively participating in ensuring the wellbeing of students, personnel and faculty members. The Faculty is committed to eliminating obstacles to student inclusion in accordance with the [Ontario Human Rights Code](#). Obstacles can be based on age, ancestry, colour, race, citizenship, ethnic origin, place of origin, creed, disability, family status, marital status, gender identity, gender expression, record of offences, sex and sexual orientation.

If you have experienced discrimination or harassment, you can seek confidential assistance through the University Human Rights Office to discuss your situation and/or [to file a formal complaint](#).

The following uOttawa Campus based services are available to you and your fellow students.

- [uOttawa Counselling Service](#) including Individual Counselling provided by uOttawa Counsellor, Pierre Bercy who specializes in anti-black racism;
- University of Ottawa Students' Union (UOSU) [Ressources for/from the Black Community](#), [Centre for Students with Disabilities](#), [Racialized and Indigenous Students Experience Centre](#), [Womxns Resource Centre](#) and [uOttawa Pride Center](#)
- Anti-racism student committee (Email: car.arc.uottawa@gmail.com)
- [Mashkawazìwogamig: Indigenous Resource Center](#)
- [University of Ottawa's Human rights office](#) including [policies on accessibility](#).

The sessions of this course will be recorded and made available for students to view in Brightspace for 3 days following each session.

Notice: Collection of Personal Information with Adobe Connect/Zoom/MS Teams Recordings

In accordance with the Ontario [Freedom of Information and Protection of Privacy Act](#) (“FIPPA”) and with the University of Ottawa (the “University”) [Policy 90](#), your personal information is collected under the authority of the University of Ottawa Act, 1965.

The Adobe Connect/Zoom/MS Teams sessions will be recorded for purposes consistent with the fulfillment of the course learning activities and outcomes. The recording may include the use of your video presence, picture, and voice. If you choose not to have your picture or voice recorded, you may disable the audio and video functionality or request accommodation from your instructor. The recording will be available only to authorized individuals through University of Ottawa systems. If you have questions about the collection, use and disclosure of your personal information in this notice, please contact your instructor.

Policy on class attendance, language quality and late submissions

Class attendance is necessary to successfully complete this course.

Your work will also be judged on your writing abilities. It is recommended to take the appropriate measures to avoid mistakes such as spelling, syntax, punctuation, inappropriate use of terms, etc. You may be penalized up to 15%, to the professor’s discretion.

Late submissions are not tolerated. Exceptions are made only for illness or other serious situations deemed as such by the professor. **There will be a penalty for late submissions.** University regulations require all absences from exams and all late submissions due to illness to be supported by a medical certificate.

Students who are excused for missing an exam will be required to write a deferred exam, except where the professor offers a re-weighting scheme which applies to the student’s case. Professors may decline to offer a deferred exam and instead re-weight the remaining pieces of work only if (i) the re-weighted scheme is indicated on the syllabus and (ii) it respects both the 25 percent rule (Academic Regulation 9.0) and the final exam rule.

IMPORTANT: All deferred final exams for courses at the Faculty of Social Sciences, except for SVS 3505, SVS 3515 and all ECO courses, will take place during the next term: in February for courses offered in Fall term and in July for courses offered in Winter term (please consult the [Important academic dates and deadlines webpage](#) to know the specific dates).

[Request for a deferred mark \(“DFR”\) forms](#) must be completed for both midterms and final exams. Once completed, the form with supporting documentation (ex. medical certificate) will automatically be sent to the academic unit which offers the course. The request **must be completed within 5 working days of the exam** and must respect all the conditions of [Academic Regulation I-9.5](#).

Absence for any other serious reason must be justified in writing, to the academic assistants of the Faculty, within five business days following the date of the exam or submission of an assignment. The Faculty reserves the right to accept or refuse the reason. Reasons such as travel, jobs, or any misreading of the examination timetable are not acceptable.

For your information:

We suggest that you advise your professor as early as possible if a religious holiday or a religious event will force you to be absent during an evaluation.

RESOURCES FOR YOU

Sexual Violence Prevention

The University of Ottawa does not tolerate any form of sexual violence. Sexual violence refers to any act of a sexual nature committed without consent, such as rape, sexual harassment or online harassment. The University, as well as student and employee associations, offers a full range of resources and services allowing members of our community to receive information and confidential assistance and providing for a procedure to report an incident or make a complaint. For more information, visit [Sexual violence: support and prevention](#).

Faculty Student Experience Centre

The goal of the Student Experience Centre is to help students with their academic and social well-being during their time at the University of Ottawa. Regardless of where a student stands academically, or how far along they are in completing their degree, the Student Experience Centre is there to help students continue on their path to success.

A student may choose to visit the Student Experience Centre for very different reasons. Younger students may wish to talk to their older peers to gain insight into programs and services offered by the University, while older student may simply want to brush up on study and time management skills or learn about programs and services for students nearing the end of their degree.

In all, the Student Experience Centre offers a place for students to talk about concerns and problems that they might have in any facet of their lives. While students are able to voice their concerns and problems without fear of judgment, mentors can garner further insight in issues unique to students and find a more practical solution to better improve the services that the Faculty of Social Sciences offers, as well as the services offered by the University of Ottawa.

Academic Writing Help Centre

At the AWHC you will learn how to identify, correct and ultimately avoid errors in your writing and become an autonomous writer. In working with our Writing Advisors, you will be able to acquire the abilities, strategies and writing tools that will enable you to:

- Master the written language of your choice
- Expand your critical thinking abilities
- Develop your argumentation skills
- Learn what the expectations are for academic writing

Counselling Services

There are many reasons to take advantage of the Counselling Service. We offer:

- Personal counselling
- Career counselling
- Study skills counselling

[Human Rights Office](#)

Mandate:

To provide leadership in the creation, implementation and evaluation of policies, procedures and practices on diversity, inclusion, equity, accessibility and the prevention of harassment and discrimination.

Contact information:

1 Stewart St. (Main Floor – Room 121) - Tel.: 613-562-5222 / Email: respect@uOttawa.ca

[Academic Accommodations](#)

The University has always strived to meet the needs of individuals with learning disabilities or with other temporary or permanent functional disabilities (hearing/visual impairments, sustained health issues, mental health problems), and the campus community works collaboratively so that you can develop and maintain your autonomy, as well as reach your full potential throughout your studies. You can call on a wide range of services and resources, all provided with expertise, professionalism and confidentiality.

If barriers are preventing you from integrating into university life and you need adaptive measures to progress (physical setting, arrangements for exams, learning strategies, etc.), contact the Access Service right away:

- in person in our office
- online
- by phone at 613-562-5976

Deadlines for submitting requests for adaptive measures during exams:

- midterms, tests, deferred exams: seven business days before the exam, test or other written evaluation (excluding the day of the exam itself)
- final exams:
 - November 15 for the fall session
 - March 15 for the winter session
 - Seven business days before the date of the exam for the spring/summer session (excluding the day of the exam itself).

[Career Development Centre](#)

Career Development Centre offers various services and resources in career development to enable you to recognize and enhance the employability skills you need in today's world of work.

[Campus Activities](#)

Student events aimed at fulfilling all sorts of student needs.

uoSatisfACTION

Do you have any [comments on your university experience or suggestions on how to improve it?](#)

Tell us!

BEWARE OF ACADEMIC FRAUD!

Academic fraud is an act committed by a student to distort the marking of assignments, tests, examinations, and other forms of academic evaluation. Academic fraud is neither accepted nor tolerated by the University. Anyone found guilty of academic fraud is liable to severe academic sanctions.

Here are a few examples of academic fraud:

- engaging in any form of plagiarism or cheating;
- presenting falsified research data;
- handing in an assignment that was not authored, in whole or in part, by the student;
- submitting the same assignment in more than one course, without the written consent of the professors concerned.

In recent years, the development of the Internet has made it much easier to identify academic plagiarism. The tools available to your professors allow them to trace the exact origin of a text on the Web, using just a few words.

In cases where students are unsure whether they are at fault, it is their responsibility to consult the [Writing and Style Guide for University Papers and Assignments](#).

Persons who have committed or attempted to commit (or have been accomplices to) academic fraud will be penalized. Here are some examples of the academic sanctions, which can be imposed:

- a **grade of “F” for the assignment or course** in question;
- an additional program requirement of **between 3 and 30 credits**;
- **suspension or expulsion** from the Faculty.

For more information, refer to the [Student’s Guide to Academic Integrity](#) and the [Academic Integrity Website \(Office of the Provost and Vice-President, Academic Affairs\)](#).