



Module



Syllabus

MIM118

Blockchain and Crypto-Economy Regulation and Governance

Lecturer:	Ali Khan
Term, year:	Winter, 2025
Number of ECTS:	6
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1. Module Description

This unit equips students with regulatory and governance frameworks associated with the emergence of Blockchain, crypto-assets, distributed ledger technologies, and fintech. Students analyze and evaluate the development of government regulation and industry self-regulation, along with practice standards and codes of conduct in the Blockchain industry and specific contexts within the crypto-economy. Upon completing the unit, students will have acquired the responsibility to contribute to professional practice by addressing management issues associated with the use of Blockchain technology. This involves analyzing, synthesizing, and evaluating various regulatory solutions within the Blockchain and crypto-economy domains.

NOTE: The content of this module is regulated by the Malta Further and Higher Education Authority (MFHEA).

2. Module Learning Outcomes

Competencies – at the end of the module/unit the learner will have acquired the responsibility and autonomy to:

C.1. Manage strategic Blockchain projects and demonstrate the ability to respond to the fast-changing regulatory environment around Blockchain industries globally by identifying global regulatory needs of different kinds and local approaches to global challenges within emerging xTech industries;

C.2. Take responsibility for contributing to professional practice while solving management issues associated with the use of Blockchain technology and analysing, synthesizing, and evaluating various Blockchain and crypto-economy regulatory solutions;

C.3. Be accountable for integrating knowledge from different legal and technological areas, such as GDPR (General Data Protection Regulation) and cybersecurity to make judgements on potential performance of different current and future regulatory changes with incomplete or limited information.

Skills – at the end of the module/unit the learner will have acquired the following skills:

Applying knowledge and understanding

The learner will be able to:

S.1. Adapt to the fast-changing regulatory environment in any of the emerging industries leveraging Blockchain technologies by reflecting on the changing characteristics of the xTech industries;

S.2. Demonstrate specialized knowledge of international Blockchain regulation that includes reflecting on data privacy and data protection responsibilities linked to operations in the xTech services industry;

S.3. Demonstrate capability in using knowledge of international Blockchain and crypto-economy regulation applied to any of the main xTech industries in terms of challenges, EU best-practices to comply with GDPR and global trends in relation to Blockchain technology regulation.

Judgement Skills and Critical Abilities – at the end of the module/unit the learner will have acquired the following judgement skills and critical abilities:

The learner will be able to:

JS.1. Perform critical evaluation and analysis of the challenges faced by the Blockchain industry nowadays such as regulations, rise of xTech industries and a global outlook of Blockchain regulation;

JS.2. Critically assess the benefits of Blockchain as a motor for innovation in the regulation arena, types of benefits of Blockchain technology and approaches to tackle constraints.

3. Module Topics and Content

Week	Topics and Content	Class Activities	Assessment	Readings
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Week 1	<p>Class 1:</p> <ul style="list-style-type: none"> ○ Module Introduction ○ Introduction to Cryptocurrency and Blockchain <ul style="list-style-type: none"> • Technical terms • Types of currency • Mining • Examples related to the content of the topic 	<p>Direct Question and Responses – Technical Terms</p> <p>The lecturer should ask the students direct questions to know if they are familiar with the technical terms used in Blockchain and Cryptocurrency.</p> <p>30-45 minutes</p>		<p>Girasa, R. (2018). <i>Regulation of Cryptocurrencies and Blockchain Technologies: National and International Perspectives</i>. Springer. Page 18-26 and page 51-54</p> <p>Finck, M. (2018). <i>Blockchain Regulation and Governance in Europe</i>. Cambridge University Press. Chapter 1, page 1-14</p>
	<p>Class 2:</p> <ul style="list-style-type: none"> ○ Blockchain and Smart Contracts ○ How Blockchain Establishes a New Form of Law from a Regulatory Point of View: <ul style="list-style-type: none"> • Blockchain Basics • Smart Contracts • Crypto Assets and the evolution of global markets • Examples related to the content of the topic 	<p>Research Project</p> <p>In groups of 2-4, research online the pros and cons of Blockchain Technology. Additionally, explore various examples worldwide related to the evolution of markets after the advent of Blockchain. Pay particular attention to the rules and laws established by Blockchain from a regulatory perspective.</p> <p>45 minutes</p>		<p>Cermeño, J. S. (2016). <i>Blockchain in Financial Services: Regulatory Landscape and Future Challenges for Its Commercial Application</i>. BBVA Research Paper, 16, 20.</p> <p>Finck, M. (2018). <i>Blockchain Regulation and Governance in Europe</i>. Cambridge University Press. Chapter 1, page 16-28; chapter 6, page 154-165</p>
Week 2	<p>Class 3:</p> <ul style="list-style-type: none"> ○ Cryptocurrency and Mining ○ Governance Framework ○ Privacy Management ○ Technological Scalability and Interoperability 	<p>Group Problem-solving</p> <p>In groups of 2 to 4, discuss the security and the main privacy challenges to Blockchain. The governance issues with cryptocurrencies whose decentralized frameworks and anonymity make them especially attractive for illicit activity, money laundering and sanction evasion; how can you face these challenges?</p> <p>45 minutes</p>	<p>Formative Assessment 1: Case Study 1 (15%)</p> <p>Please refer to section 4.1.1.</p> <p>To be uploaded on the VLE.</p>	<p>Finck, M. (2018). <i>Blockchain Regulation and Governance in Europe</i>. Cambridge University Press. Chapter 3, page 80-84</p>
	<p>Class 4:</p> <ul style="list-style-type: none"> ○ Identification of the Different Access Points of the Blockchain Space 	<p>Discussion</p> <p>In groups of 3 to 4, discuss the following:</p> <p>The diverse types of Blockchain (Public, Private, Hybrid and Consortium); also discuss the key issues and difficulties within the</p>		<p>Finck, M. (2018). <i>Blockchain Regulation and Governance in Europe</i>. Cambridge University Press. Chapter 2, page 45-58</p>

	<ul style="list-style-type: none"> ○ Main Difficulties within the Current Regulatory Context 	<p>current regulatory context in Blockchain.</p> <p>30 minutes</p>		
Week 3	<p>Class 5:</p> <ul style="list-style-type: none"> ○ Blockchain and Intellectual Property (Part One) <ul style="list-style-type: none"> • Regulatory reporting information standards • Regulatory sandbox approach for testing technologies • Implications of GDPR in Blockchain technology implementation 	<p>Team building</p> <p>In this activity, the whole class is considered one team so that students can share their thoughts and expectations while supporting each other. Afterward, students may choose one or two teams to present their findings to the lecturer. The activity includes the following themes:</p> <ol style="list-style-type: none"> 1. The regulatory reporting information standards 2. The implications of GDPR in Blockchain Technology implementation <p>60 minutes</p>		<p>Finck, M. (2018). <i>Blockchain Regulation and Governance in Europe</i>. Cambridge University Press. Chapter 6, page 158-160; chapter 4, page 99-115.</p> <p>Zetzsche, D. A., Buckley, R. P., Barberis, J. N., & Arner, D. W. (2017). <i>Regulating a Revolution: From Regulatory Sandboxes to Smart Regulation</i>. <i>Fordham J. Corp. & Fin. L.</i>, 23, 31. Chapter 4, page 64-90</p>
	<ul style="list-style-type: none"> ○ Blockchain and Intellectual Property (Part Two) <ul style="list-style-type: none"> • Understanding of the conditions necessary to make a Blockchain app compliant with GDPR • How regulation can become a motor of innovation for different ends <p>Provide real examples of Blockchain regulation to date</p>	<p>Debates and Discussions</p> <p>In groups of 2-3, discuss the following:</p> <ul style="list-style-type: none"> -What is GDPR? What are GDPR-compliant Blockchains? -What are the principles of GDPR? Examples given. <p>20 minutes</p>		<p>Girasa, R. (2018). <i>Regulation of Cryptocurrencies and Blockchain Technologies: National and International Perspectives</i>. Springer. Chapter 6, page 153-161</p>
Week 4	<ul style="list-style-type: none"> ○ Blockchain and Intellectual Property (Part Three) <ul style="list-style-type: none"> • Patent litigation • What can be protected? 	<p>Debate and Discussion</p> <p>In groups of 2-3, students discuss the following:</p> <ul style="list-style-type: none"> - Patent litigation - The role of industry standards <p>30 minutes</p>	<p>Formative Assessment 2: Case Study 2 (20%)</p> <p>Please refer to section 4.1.2.</p> <p>To be uploaded on the VLE.</p>	<p>Girasa, R. (2018). <i>Regulation of Cryptocurrencies and Blockchain Technologies: National and International Perspectives</i>. Springer. Page 60-81</p>

	<ul style="list-style-type: none"> The role of industry standards Lessons from wireless telecommunications industry standards 			
	<p>Class 8:</p> <ul style="list-style-type: none"> Virtual Currency Money Transmission Regulation Understanding of the legal treatment of non-personal data under the EU Law Understanding of the regulation around cryptocurrencies from different angles Federal virtual currency money transmission FinCEN Virtual Currency Guidance Attempts to standardize licensing practices 	<p>Research Presentation/Feedback from Others</p> <p>In groups of 2-3 students, each group is required to prepare 6 to 8 slides to present the findings of:</p> <ul style="list-style-type: none"> The regulation of different virtual currencies by focusing on the party(ies) that applies those regulations. The legal treatment of non-personal data under the EU law The guidance of FinCEN virtual currency <p>- Note: At the end of each presentation students can give feedback on content and also, they can give their opinions and suggestions.</p> <p>60 minutes</p>		<p>Girasa, R. (2018). <i>Regulation of Cryptocurrencies and Blockchain Technologies: National and International Perspectives</i>. Springer. Page 85-120</p>
Week 5	No Classes			
Week 6	<p>Class 9:</p> <ul style="list-style-type: none"> Cryptocurrency and other Digital Asset Funds The global regulatory framework generally The regulatory treatment of cryptocurrencies and other digital assets 	<p>Brainstorming</p> <p>In groups of 2-3, students participate in the following topics:</p> <ul style="list-style-type: none"> What are the different digital asset funds? What is the regulatory treatment of cryptocurrencies? What is the role of AP? <p>30 minutes</p>	<p>Formative Assessment 3: Case Study 3 (20%)</p> <p>Please refer to section 4.1.3.</p> <p>To be uploaded on the VLE.</p>	<p>Yeung, K. (2019). <i>Regulation by Blockchain: The Emerging Battle for Supremacy Between the Code of Law and Code as Law</i>. <i>The Modern Law Review</i>, 82(2), 207-239.</p> <p>Treleaven, P., & Batrinca, B. (2017). <i>Algorithmic Regulation: Automating Financial Compliance Monitoring and Regulation Using AI and Blockchain</i>. <i>Journal of Financial Transformation</i>, 45, 14-21. (page 168-195)</p>

	<ul style="list-style-type: none"> The current state of consumer token regulation around the globe What is the role of the AP? Decentralized networks Seeding network activity and achieving decentralization 			
	<p>Class 10:</p> <ul style="list-style-type: none"> Overview of the regulation situation in the InsurTech and PropTech industries (aside from FinTech) 	<p>Case Study/Presentation</p> <p>In groups of 2, read the following question case and prepare an oral presentation to deliver your findings (refer Class Activities section 4.3)</p> <p>Task duration: 6 to 8 min per group.</p>		<p>Lin, L., & Chen, C. C. (2020). <i>The Promise and Perils of InsurTech</i>. Forthcoming, <i>Singapore Journal of Legal Studies</i>.</p> <p>Baum, A. (2017). <i>PropTech 3.0: The Future of Real Estate</i>. (chapter 1, 2 and 3)</p> <p>Marano, P., & Noussia, K. (2020). <i>InsurTech: A Legal and Regulatory View</i>. Springer. Page 24-35</p>
Week 7	<p>Class 11:</p> <ul style="list-style-type: none"> Main Regulatory Bodies in the EU and the US: <ul style="list-style-type: none"> The main governance principles Models (on-chain vs off-chain) Layers (network/application), Integration with third parties Highlight the importance of governance in future Blockchains 	<p>Discussion</p> <p>In groups of 2-3, discuss the following:</p> <p>- Why is governance important in Blockchain?</p> <p>20 minutes</p>	<p>Formative Assessment 4: Oral Presentation (25%)</p> <p>In groups of 3-4, students will work on the following project:</p> <p>Select a real organization operating in the field of Blockchain or cryptocurrencies, considering that this organization is expanding its operations to three markets (one in the EU and any two outside the EU).</p> <p>Study the various legislative positions towards Blockchain and cryptocurrencies, as well as the activities associated with them, in the countries of interest.</p> <p>Each group should prepare 8-10 slides, and the presentation of the findings should not exceed 10 minutes per group. The due date is in class 15.</p>	<p>Rieger, A., Lockl, J., Urbach, N., Guggenmos, F., & Fridgen, G. (2019). <i>Building a Blockchain Application that Complies with the EU General Data Protection Regulation</i>. <i>MIS Quarterly Executive</i>, 18(4).</p> <p>Finck, M. (2018). <i>Blockchain Regulation and Governance in Europe</i>. Cambridge University Press. Chapter 3- page 80-84</p>
	<p>Class 12:</p> <ul style="list-style-type: none"> Cryptocurrency Mining: a real case Study <ul style="list-style-type: none"> Real example of on chain and off chain 	<p>Project-based Learning</p> <p>In groups of 2 to 3 students. Students can bring their laptops or tablets and create and open an account to learn</p>		<p>Girasa, R. (2018). <i>Regulation of Cryptocurrencies and Blockchain Technologies: National and International Perspectives</i>. Springer. page 51-53</p>

	transactions and of creating and opening an account, buying, and selling crypto	how to buy and sell crypto in real life. 45 minutes		
Week 8	<p>Class 13:</p> <ul style="list-style-type: none"> ○ Cryptocurrency Compliance and Risks: A European KYC/AML Perspective: <ul style="list-style-type: none"> • Key definitions and concepts • Legal and regulatory challenges • Technological solutions • Examples from Australia, Cyprus, USA 	<p>Discussion</p> <p>In groups of 2-3 discuss the following:</p> <ul style="list-style-type: none"> -Definition and concepts of cryptocurrency compliance and risk - Discuss the KYC/AML perspective - Examples around the globe of the cryptocurrency compliance <p>40 minutes</p>	<p>Formative Assessment 5: Case Study 4 (10%)</p> <p>Please refer to section 4.1.4</p> <p>To be uploaded on the VLE.</p>	<p>Cermeño, J. S. (2016). <i>Blockchain in Financial Services: Regulatory Landscape and Future Challenges for Its Commercial Application</i>. BBVA Research Paper, 16, 20.</p> <p>Girasa, R. (2018). <i>Regulation of Cryptocurrencies and Blockchain Technologies: National and International Perspectives</i>. Springer. page 220-246</p>
	<p>Class 14:</p> <ul style="list-style-type: none"> ○ Decentralized Finance <ul style="list-style-type: none"> • What is Decentralized Finance? • Decentralized Finance protocols • Proof of stake networks and staking as a service • Regulatory issues in decentralized finance • Regulation of institutions or activities 	<p>Discussion</p> <p>In groups of 2-3 discuss the following:</p> <ul style="list-style-type: none"> -What is Decentralized finance? -What are the regulatory issues in Decentralized finance? - What is meant by the proof of stake networks and staking as a service? <p>20 minutes</p>		<p>Lee, D., & Deng, R. H. (2018). <i>Handbook of Blockchain, Digital Finance, and Inclusion: Cryptocurrency, FinTech, InsurTech, and Regulation</i>. Academic Press. (Vol 1)</p> <p>Finck, M. (2018). <i>Blockchain Regulation and Governance in Europe</i>. Cambridge University Press. Chapter 3- page 18, 22-24, 60-63</p> <p>Ducas, E., & Wilner, A. (2017). <i>The Security and Financial Implications of Blockchain Technologies: Regulating Emerging Technologies in Canada</i>. <i>International Journal</i>, 72(4), 538-562.</p>
Week 9	Class 15 Revision	Formative Assessment Oral Presentation		
Week 10 & 11	Submission of the Summative Assessment Activities			

4. Module Assessment

The assessment of this Module consists of Formative and Summative assessment activities listed in the table 1 below:

Table 1:

Face-to-Face 100%	
Formative	Summative
16.5 hours	13.5 hours
Set Exercise/Case Study (in groups) – 65%	Written Assignment (1500 words) – 50%
Oral Presentation (in groups) – 25%	Project Output (1500 words) – 50%

*Prefinal grade is based on the Formative Assessment activities, and it is not a part of a module final grade. **Students should have over 50 points of the prefinal grade to submit summative assessment activities representing module final grade.***

Table 2:

Formative	Summative
<p>Oral Assessment/ Online Participation: On a weekly basis, students will have to participate in a discussion forum, with questions covering the topics of the week. This will help students interact with different perspectives due to the diversity of participation and develop proficiency in understanding and applying concepts and developing critical thinking.</p>	
<p>Set Exercise/Case Study: Students work in groups on case studies related to Blockchain and crypto-economy regulation and governance.</p>	<p>Written Assignment: Students should select a real case that allows them to showcase their understanding of one of the topics explored throughout the unit. The assignment should address the following: 1) An introduction explaining the case chosen, the applicable legal framework and an explanation of the main legal concepts; 2) An explanation of the legal debate that the case raises; 3) Assessment of the effectiveness of the applicable</p>

	regulations and opinion on how to enhance them.
Oral Presentation: Students work in groups on the following project: select a real organization operating in Blockchain or cryptocurrencies. Consider that this organization is expanding its operations to three markets (one in the EU and any two outside the EU). Study the various legislative positions towards Blockchain and cryptocurrencies, and the activities associated with them in the countries of interest. Present findings.	Project Output: Each student individually assesses the challenges associated with legal restrictions on the implementation of Blockchain projects in one of the selected countries and develops a Compliance Policy Plan to operate in that country.

The passing grade for the module is 60%.

4.1. Formative Assessment

4.1.1. Formative Assessment 1

Case Study: Read the following case and answer all questions (Please note that each answer should not exceed 500 words).

Amrita Ahuja is the CFO (Chief Financial Officer) of Square

Ankit should support the push into Bitcoin—as both an accepted form of payment and an investment on the balance sheet. At Square we believe there’s a high probability that the internet will have its own native cryptocurrency, and Bitcoin is the strongest contender. It’s the most secure and resilient, with a principled, decentralized, transparent, and consensus-based development model. We foresee a future in which companies won’t have to navigate fiat currencies and local rules and regulations that create complexity and prohibitive costs for consumer transactions across borders. Cost, time, and security inefficiencies will fall away, and companies that accept Bitcoin payments will be able to serve anyone in the world, including people who have historically been marginalized by financial systems or who distrust federal banks (as in Latin America and certain other regions). This fits perfectly with Ivory Tower’s mission of bringing quality higher education to underserved communities globally, and the company should get ahead of the game.

Thorsten’s also right that having Bitcoin on the balance sheet will demonstrate to customers, employees (present and future), shareholders, and onlookers that it has “skin in the game” and will help make a more inclusive internet currency a reality. In addition, Bitcoin can provide attractive diversification and act as an inflation hedge.

Square invested 5% of its cash and cash equivalents in Bitcoin. We believe that the long-term opportunity is worth any near-term volatility and that our investment will enable us to learn and help improve the system while increasing trust in it. To that end, Square has set up the Crypto Open Patent Alliance to increase access to crypto technology through a collaborative patent library; Square Crypto, an independent team solely focused on contributing to the Bitcoin open-source work; a \$10 million Bitcoin clean-energy initiative to incentivize miners to use renewable sources; and a \$5 million endowment to fund education about Bitcoin and promote its adoption. Ivory Tower could similarly be at the leading edge of network development, building good relationships with regulators to enable consumer protection and address bad actors while also

fostering innovation and figuring out how to master custody, insurance, exchange, accounting, payroll, tax reporting, and compliance. Ankit, of course, needs to address all the concerns that his team and Cindy Yu have raised. But with Thorsten's support and a clear strategy and execution plan, he can argue that the company can be at the forefront of this rapidly emerging trend. This is the time for him to truly lead as CFO.

Roxi Wen is the CFO of Invitae

The case *against* Ivory Tower's moving to accept and hold Bitcoin is far stronger than the one *for* it. Ankit should oppose the plan—but only after having a frank conversation with Thorsten to outline the downsides and explore other ideas.

Paul is right that cryptocurrency is too volatile to be of balance-sheet quality. If Ivory Tower wants an inflation hedge, many alternatives—gold and real estate, for example—are less risky. Moreover, managing Bitcoin transactions and custody will require the finance department to build entirely new capabilities, such as safe storage for Bitcoin keys, and it's unclear that that would be an effective use of staff time. And the regulatory environment is extremely uncertain; difficult disclosure rules or divestment requirements could crop up at any time.

I also find it hard to believe people will want to pay tuition in Bitcoin. Most buyers of crypto want to hold it for capital appreciation and as an inflation hedge, just like Thorsten. Why would customers use their holdings to pay for courses, logging taxable capital gains now? Thorsten thinks Bitcoin will be more secure and efficient than currencies backed by governments. But that's debatable, since fiat payments, particularly in developed countries, move securely and often more rapidly than Bitcoin blocks do.

Sure, Bitcoin may someday trade as frequently and easily as dollars, euros, and yen. Ivory Tower might get useful marketing value from being ahead of the curve and solidifying its reputation as a forward-looking innovator. However, given the complexities surrounding Bitcoin, I think there are more-effective ways to gain competitive advantage.

Ankit needs to artfully manage Thorsten. When you work with a smart, fast-moving leader who is full of ideas, you often feel your job is to constantly say no. But that's not a productive relationship. Instead, you want to have candid strategic conversations.

The two men should talk about what Thorsten really wants. Is it to embrace Bitcoin? Or to become part of the Blockchain revolution? And if it's the latter, is there another way to deploy the technology in the business? For example, could it be used to set up an open, distributed operating system where users could create their own classes? Could payment collection happen via Blockchain even when customers pay in traditional currencies? These are much broader questions, and Thorsten's answers might help Ankit find a way to honor the CEO's wishes without doing exactly as he says.

At my company, my colleagues have lots of ideas about what to do with our significant cash reserves, but no matter how wild their suggestions are, I never just reject them. I sit down with people, ask what they're trying to accomplish, and brainstorm how to achieve those goals even if it's in ways different from what they've suggested. Ankit should do the same with Thorsten. Of course, the CEO could put his foot down and persuade the board to back him. Elon Musk was able to do that with Bitcoin investments at Tesla. But even then, Ankit could pitch a lower-risk experiment—perhaps creating a small, separate holding company to test Bitcoin in. The CFO has authority and credibility with Thorsten and the board. He shouldn't be afraid to use it.

Questions:

- 1 – Do you recommend Ankit to push and support the Bitcoin Plan? Why? (50 points)
- 2 – Even though Blockchain Technology and Cryptocurrency are getting a lot of attention nowadays, people are still afraid to use it and go inside this world. How do you motivate people to start thinking of Blockchain and go into this new world of technology? (50 points)

4.1.2. Formative Assessment 2

Read the following case and answer the questions: (please note that each answer should not exceed 500 words).

The guidelines issued by the Jiangsu High Court, cover a wide range of topics, such as punitive damages for willful infringement, restriction of malicious prosecution, support of reasonable attorney's fee, etc. The guidelines stipulate in Article 9 that evidence collected or preserved with modern technologies should be allowed according to the law. If evidence is preserved using timestamp, Blockchain, and other devices, or is obtained with remote login control realized with Telnet commands, judges should recognize the evidence if it meets the standard of proof. Without a US-style discovery process, Chinese litigants usually must use their own resources to produce evidence. For digital evidence such as webpages and documents, which is by nature easily tampered with and destroyed later, the litigants usually need to store the evidence in advance under witness of a notary public to guarantee the integrity of the evidence. However, notarization can be disproportionately costly, especially for cases where the amount of damages is relatively small.

As an encryption technology, Blockchain offers a strong tamper-proof technical measure with a cost remarkably lower than notarization. Notarization of 100 pages of documents or screenshots of webpages could cost at least RMB 1,000 to 2,000 (USD140 to 280), while Blockchain deposition services would cost as little as RMB 10 (USD1.4).

In June 2018, Hangzhou Internet Court admitted Blockchain-authenticated evidence in a copyright case in which the plaintiff used a third-party Blockchain deposition service to secure online webpage evidence of the alleged copyright infringement. This was the first court to do so in the country. In the case, the plaintiff used a snapshot of webpages of the defendant as evidence of copyright infringement. Prior to filing the case, a third-party Blockchain platform, Baoquan.com, was used to securely capture and store the snapshot. The Blockchain platform obtained a copy of the snapshot, source code of the webpage, and invocation log, packed them in a package file and calculated the hash value of package file, and then uploaded the hash value to Blockchains, which enabled the court to determine that the package file downloaded from Baoquan.com was intact. It did this by comparing the hash value of the downloaded package file and the hash value stored on the Blockchains.

In September 2018, the Supreme People's Court officially issued the *Provisions of the Supreme People's Court on Several Issues Concerning the Trial of Cases by Internet Courts*. Article 11, Paragraph 2 of the provisions specifies that "[f]or electronic data submitted by the parties concerned, if collected through electronic signature, trusted timestamping, hash value verification, Blockchain and other evidence collection, and verified with retention and tamper-proof technical means or via the electronic forensics and deposit platform, which are able to prove its authenticity, the Internet Court shall confirm its authenticity." The rule thus confirmed the practice of Hangzhou Internet Court and expanded it to all three Internet courts.

After the issue of the provisions, the Internet courts of Hangzhou, Beijing, and Guangzhou launched their own Blockchain platforms to increase credibility of generating, storing, distributing, and using electronic data. The courts have cooperated on third-party evidence deposition platforms. The user stores the digital evidence on a third-party evidence deposition platform which directly stores the calculated hash values of the digital evidence on the court's Blockchain. This helps both the judges and the litigants.

Despite the above developments, Blockchain evidence is still seen by many as only acceptable for use by Internet courts. The guidelines by the Jiangsu High Court could extensively extend the practice. In practice, all courts in the Jiangsu province would follow the provisions when hearing intellectual property cases.

There are a few cases so far that can be used as a reference for how the courts examine Blockchain evidence. According to the Hangzhou Internet Court mentioned above, the court

examines if the evidence storage platform is legal and neutral, if the technology used for deposit of the evidence is reliable, and if the electronic data has been tampered with. The court points out that Blockchain evidence should be determined in a comprehensive manner and on a case-by-case basis. The emphasis should be on examination of the source of electronic data and the content integrity, security of the technical means, reliability of the methods, legitimacy of formation, and degree of association with other evidence.

0. Criticize the case by paying attention to logic behind and mention if you agree with the decision of the court or not and say why. (40 points)
1. Can Alice decision be used in this case? Why? (25 points)
2. Why is Intellectual Property always changing? (15 points) Is it good or bad for companies? (20 points) You can relate your answer onto the case.

4.1.3. Formative Assessment 3

Read the following case and answer the questions: (please note that each answer should not exceed 500 words).

The United States regulation of emerging digital financial technologies is in a state of uncertainty. This regulatory ambiguity was highlighted in the recent crypto tax provision in the Biden administration's infrastructure bill, which included overly broad and vague language about the design of cryptocurrencies.

Specifically, the language opened up a scenario in which cryptocurrency validators, miners, and software developers are unnecessarily required to report financial information to the government. A proposed amendment to clarify the language failed to pass, and as a result, greater clarity will need to be provided by the U.S. Department of Treasury and the U.S. House of Representatives. The provision exemplifies how the current environment stifles innovation and places consumers at unnecessary risk by attempting to integrate digital assets into a financial framework based on outdated technologies and functions.

The current regulatory landscape struggles to implement and manage the decentralized structure essential for the use of cryptocurrencies. Traditionally, regulation of financial digital assets is centered around the Howey Test, which was established in 1946 by the U.S. Supreme Court.

The key aspect of the Howey Test — and primary source of confusion in managing digital assets — is determining whether a transaction qualifies as an investment in which one party expects to receive future profits. Is the transaction an "investment contract," and therefore a security? The Howey Test was created to manage securities that do not neatly fit into listed financial instruments.

The Howey test, however, fails to distinguish between attributes of decentralized financial digital assets and may incorrectly categorize many decentralized assets as securities. To help interpret the Howey Test, agencies consider how managers and issuers of the financial digital assets sell the product in question. Financial digital assets are often either centralized, with clear managers and issuers, or decentralized, with an asset that is completely independent.

Decentralization, however, is not binary; it requires completing a step-by-step process that disintermediates the managers and issuers from control. If, in the process of decentralization, managers and issuers can still influence the success of the financial digital asset, the product could be classified as a security under the Howey Test. The difficulty in determining what constitutes a "sufficiently decentralized asset" has led to many regulatory problems. Most notably, the Securities Exchange Commission's (SEC) ongoing lawsuit against Ripple. Additionally, given that Blockchains are open-source technology, it is sometimes unclear who is influencing the success of the digital asset. If it avoids responsibility for creating new digital asset-specific rules, the SEC will face continued regulatory problems around decentralization in the future.

As the SEC lawsuit against Ripple demonstrates, the regulatory environment is geared towards reactive enforcement instead of proactive digital asset categorization. Most guidance comes in

the form of singular enforcement settlements that provide temporary solutions. The SEC's 75 enforcement actions against cryptocurrencies between 2013 and 2020 highlight how federal agencies have relied on precedent instead of top-down policymaking.

Federal agencies' proactive guidance addresses smaller and more individualized scenarios, which often come from their research hubs, press releases, and solicitations for public input rather than through official rulemaking. These tools and initiatives indicate what the agencies are looking into for regulation and their future research without deadlines for implementation.

Finally, while interagency collaboration is limited at present, it is slowly but surely increasing. For example, the SEC, Financial Crimes Enforcement Network (FinCEN), and CFTC issued a joint statement in 2019 to clarify anti-money laundering (AML) and countering financing terrorism regulations. The White House is also beginning to establish joint task forces between agencies including the SEC and CFTC to explore new territory for financial digital asset jurisdiction. As federal agencies lack established processes to collaborate on financial digital assets, future joint agency work will likely follow the pace set by the White House or Congress – making their initiatives essential.

*(The Howey Test refers to the U.S. Supreme Court case for determining whether a transaction qualifies as an "investment contract," and therefore would be considered a security and subject to disclosure and registration requirements under the Securities Act of 1933 and the Securities Exchange Act of 1934.

Under the Howey Test, an investment contract exists if there is an "investment of money in a common enterprise with a reasonable expectation of profits to be derived from the efforts of others." The test applies to any contract, scheme, or transaction. The Howey Test is important for situating Blockchain and digital currency projects with investors and project backers. Certain cryptocurrencies and initial coin offerings (ICOs) may be found to meet the definition of an "investment contract" under the test).

Answer the following questions:

0. What is the initial challenge in regulating financial digital assets? (35 points)
1. What are the fundamental problems that permeate the financial digital asset landscape? (35 points)
2. To protect consumers and promote future financial innovation, what do you recommend the Congress in terms of creating a digital asset framework for decentralized technology? (30 points)

4.1.4. Formative Assessment 4

Read the following case and answer the questions: (please note that each answer should not exceed 500 words).

EU seeks to prevent use of crypto to avoid Russia sanctions *(Sam Fleming in Brussels, Joshua Oliver in London, and James Politi in Washington March 2, 2022).*

The EU is considering new measures to ensure digital assets are not used to dodge sanctions against Russia as the bloc toughens its enforcement of the financial penalties imposed on Moscow in the past week. EU finance ministers and other officials discussed in a video conference call on Wednesday the risk that cryptocurrencies could be used to circumvent sanctions, officials said.

Amongst those who pushed for action was Christine Lagarde, the European Central Bank president.

Bruno Le Maire, the French finance minister, said after the meeting that steps were under consideration to "further increase the effectiveness" of the sanctions and avoid any circumvention of the measures — including through cryptocurrencies. The commission is now expected to consider proposals to deal with the issue.

The discussion in Europe comes as lawmakers in the US and UK also raised concerns that crypto transactions could become a back door for moving money to and from Russia, undermining western efforts to isolate the country from the global financial system. Many large crypto exchanges, including those based in offshore jurisdictions, have pledged to honor existing sanctions but resisted calls for a blanket ban on dealing with Russia. Several exchanges said broad restrictions would hurt ordinary Russians and run contrary to cryptocurrencies' founding libertarian ideology.

"If people want to avoid sanctions there's always multiple methods," Changpeng Zhao, chief executive of Binance, told the BBC on Wednesday. "You can do it using cash, diamonds, using gold. I don't think crypto is anything special."

During the call, Lagarde argued in favor of legislation so that companies engaged in the issuance of crypto assets or providing services related to them should not deal with clients in Russia, according to people familiar with the meeting. The goal, she argued, was to avoid the use of digital assets to get around the sanctions and this week's decision to disconnect seven Russian banks from Swift. In an interview with the Financial Times earlier, Paolo Gentiloni, the EU's economics commissioner, said authorities had noted an increase in the use of cryptocurrencies in recent days, which he said, "could be a way to bypass the measures taken to freeze the assets in Russia."

In the US, a group of Democrats on the influential Senate banking committee wrote a letter to Janet Yellen, the Treasury secretary, expressing their worries that cryptocurrency could be used to evade sanctions.

"Strong enforcement of sanctions compliance in the cryptocurrency industry is critical given that digital assets, which allow entities to bypass the traditional financial system, may increasingly be used as a tool for sanctions evasion," wrote the senators, including Sherrod Brown of Ohio, the chair of the panel, Mark Warner of Virginia, and Elizabeth Warren of Massachusetts.

The lawmakers said they were worried that the Office of Foreign Assets Control, the arm of the Treasury which oversees US sanctions policy, "has not developed sufficiently strong and effective procedures for enforcement in the cryptocurrency industry." The US Treasury declined to comment on the letter, but a US official noted that it would be difficult for Russia and its wealthy individuals to use cryptocurrency in a substantial way to evade sanctions.

"You can't run a G20 economy on crypto. Big banks in an economy need real liquidity and conducting large transactions in virtual currency is likely to be slow and expensive," said the official. UK lawmakers have also responded to the risk of crypto being used to evade or undermine sanctions. "We are considering how the UK along with its allies can prevent crypto assets from emerging as loopholes to evade sanctions," Baroness Joanna Penn, a government whip, said in the House of Lords on Wednesday.

MP Tom Tugendhat, chair of the foreign affairs committee, and Conservative peer Lord Aamer Sarfraz wrote to the Financial Conduct Authority this week, urging the regulator to issue new guidance to crypto groups on the sanction's regime. "There remains a considerable risk of Russian individuals and entities sanctioned last week continuing to trade in cryptocurrency assets," they said.

The FCA said it had "reached out to each crypto firm registered with us to ensure that they are aware of sanctions and their responsibilities" and was "working with partners to actively monitor these firms."

It added: "We have made it clear to crypto firms, banks and others that we expect them to focus on their sanction controls and, with our partners, we will be supervising their actions." On the other hand, President Vladimir Putin in January 26, 2022, has asked Russian politicians and the central bank to reach consensus, he said on Wednesday, following a clash over how much control is needed on cryptocurrencies as they gain traction in Russia.

Representatives from the finance ministry and parliament on Tuesday said regulations, not restrictions, were needed, days after the central bank proposed bans to deal with what it said were threats to financial stability, to citizens' wellbeing and to monetary policy sovereignty. "The Bank of Russia deals with these issues and regulates them," Putin told a meeting with members of government.

"The central bank is not standing in the way of regulatory progress and is itself making the necessary efforts to introduce new technologies into this sphere of activity." Russia for years argued against cryptocurrencies, saying they could be used in money laundering or to finance terrorism. It eventually gave them legal status in 2020 but banned their use as a means of payment.

This year, it plans to test a digital rouble to facilitate payments for individuals and businesses and try to make its currency more global in the face of Western sanctions. Konstantin Shulga, CEO of digital financial marketplace Finery Markets, said the company estimated about 7% of the Russian population owns cryptocurrency. The central bank has proposed banning cryptocurrency mining, the energy-intensive process whereby powerful computers compete against others hooked up to a global network to solve complex mathematical puzzles. In August, Russia accounted for 11.2% of the global "hashrate" - crypto jargon for the amount of computing power being used by computers connected to the bitcoin network.

Answer the following questions:

0. It was mentioned in the text that the lawmakers were worried that the Office of Foreign Assets Control, the arm of the Treasury which oversees US sanctions policy, "has not developed sufficiently strong and effective procedures for enforcement in the cryptocurrency industry." Do you think regulations of crypto require global coordination? (40 points)
1. Since it is difficult to run a G20 economy on crypto, do you agree that G20 should have a full grasp of regulation of crypto assets? (35 points)
2. Can Cryptocurrency combat AML? (25 points)

4.2 Summative Assessment

4.2.1 Summative Assessment 1: Written Assignment (50%)

Task

Select a real case that allows you to showcase your understanding of one of the topics explored throughout the unit. The assignment should address the following:

- 1) An introduction explaining the case chosen, the applicable legal framework and an explanation of the main legal concepts;
- 2) An explanation of the legal debate that the case raises;
- 3) Assessment of the effectiveness of the applicable regulations and personal opinion on how to enhance them.

Objectives

You should demonstrate a good knowledge of the topic selected from the different classes explored in the unit; the legal framework along with the legal concepts. Moreover, you should prove a good understanding in debating the legal aspect of the specific case by revealing the present effectiveness of the applied regulations along with the personal opinion on how to enhance or modify any of the applied regulations.

Guidelines

- Times New Roman
- Font 12
- 1.5 spacing
- APA style for referencing. In text citations and a reference list are mandatory
- Word Count: 1500 excluding references

Allocation of Marks

- The introduction of the case chosen (20 points);
- The explanation of the legal debate (35 points);
- The assessment of the effectiveness of the applicable regulations (20 points)
- Personal opinion on how to enhance them (25 points)

Evaluation Criteria: Based on the evaluation rubric, students should put high emphasis on organizing their work, the content, and the visuals in each answer.

Evaluation Criteria: Rubric

Criteria	Identification of Main Issues	Analysis	Solutions	Research	APA structure and format
	<ul style="list-style-type: none"> • Clear explanation of key strategic issues. • The problems, scope and seriousness were clearly identified in the discussions. • There was a well-focused diagnosis of strategic issues and key problems that demonstrated a good grasp of the company's present situation and strategic issues. • Effective Executive Summary. • Did not waste space summarizing information already found in the case. 	<ul style="list-style-type: none"> • Logically organized, key points, key arguments, and important criteria for evaluating business strategies were easily identified. • Critical issues and key problems that supported the Case Analysis were identified and clearly analyzed and supported. 	<ul style="list-style-type: none"> • Specific recommendations and/or plans of action provided. • Specific data or facts were referred to when necessary to support the analysis and conclusions. • Recommendations and conclusions were presented and supported in an effective manner. 		<ul style="list-style-type: none"> • Proper organization, professional writing, and logical flow of analysis. Formatting. • Logically organized, key points, key arguments, and important criteria for evaluating the business easily identified. • Key points were supported with a well thought out rationale based on applied specific concepts or analytical frameworks to data provided in the case. • Proper grammar, spelling, punctuation, third person objective view, professional writing, and syntax.
0-60	Identifies and understands a few of the issues in case study.	Incomplete or no analysis of the issues.	Little or no action suggested, and/or inappropriate solutions to all the issues in the case study.	Incomplete research and links to any readings.	Many errors and a lack of organization.
60-70	Identifies and understands some of the issues in the case study.	Superficial analysis of some of the issues in the case.	Superficial and/or inappropriate solutions to some of the issues in the case study.	Limited research and documented links to any readings.	There are more than occasional errors. Variety of formatting styles, with some inconsistencies throughout the paper.
70-80	Identifies and understands most of the main issues in the case study.	Thorough analysis of most of the issues.	Appropriate, well thought out comments about solutions or proposals for solutions to most of the issues in the case study.	Good research and documented links to the material read.	There are occasional errors. Good skill level in formatting and organizing material in assignment. Above average level of preparedness, with few formatting errors.
80-100	Identifies and understands all the main issues in the case study.	Insightful and thorough analysis of all the issues.	Well documented, reasoned and pedagogically appropriate	Excellent research into the issues with clearly documented	Writing is totally free of errors. Meets all APA standards. Formatting

			comments on solutions or proposals for solutions to all issues in the case study.	links to the course text and/or outside readings.	excellent.
Grade					

4.2.2 Summative Assessment 2: Project Output (50%)

Task

This task is linked to your Formative Presentation.

Individually assess the challenges associated with legal restrictions on the implementation of Blockchain projects in **one** of the selected countries and develop a Compliance Policy Plan to operate in that country.

Objectives

Demonstrate a good understanding in the factors or drivers that cause challenges in implementing Blockchain projects in a selected country by taking into consideration also the legal restrictions of applying Blockchain, and to show good comprehension in developing a special compliance policy plan to operate in the selected country.

Guidelines

- Times New Roman
- Font 12
- 1.5 spacing
- APA style for referencing. In text citations and a reference list are mandatory
- Word Count: 1500 excluding references

Allocation of Marks

- Assessing the challenges (50 points)
- Developing the compliance policy plan (50 points).

Evaluation Criteria: Rubric - based on the evaluation rubric, students should put high emphasis on organizing their work, the content, and the visuals in each answer.

Criteria 100	Identification of Main Issues	Analysis	Solutions	Research	APA structure and format
	<ul style="list-style-type: none"> • Clear explanation of key strategic issues. • The problems, scope and seriousness were clearly identified in the discussions. • There was a well-focused diagnosis of strategic issues and key problems that 	<ul style="list-style-type: none"> • Logically organized, key points, key arguments, and important criteria for evaluating business strategies were easily identified. • Critical issues and key problems that supported the Case Analysis were identified and clearly 	<ul style="list-style-type: none"> • Specific recommendations and/or plans of action provided. • Specific data or facts were referred to when necessary to support the analysis and conclusions. • Recommendations and conclusions were 		<ul style="list-style-type: none"> • Proper organization, professional writing, and logical flow of analysis. APA formatting. • Logically organized, key points, key arguments, and important criteria for evaluating the business logic easily identified.

	demonstrated a good grasp of the company's present situation and strategic issues. • Effective Executive Summary. • Did not waste space summarizing information already found in the case.	analyzed and supported.	presented and supported in an effective manner.		• Key points were supported with a well thought out rationale based on applying specific concepts or analytical frameworks to the data provided in the case. • Proper grammar, spelling, punctuation, third person objective view, professional writing, and syntax.
0 to 4 pts (20 out of 100)	Identifies and understands a few of the issues in case study.	Incomplete or no analysis of the issues.	Little or no action suggested, and/or inappropriate solutions to all the issues in the case study.	Incomplete research and links to any readings.	Many errors and a lack of organization.
5 to 9 pts (25-40 out of 100)	Identifies and understands some of the issues in the case study.	Superficial analysis of some of the issues in the case.	Superficial and/or inappropriate solutions to some of the issues in the case study.	Limited research and documented links to any readings.	There are more than occasional errors. Variety of formatting styles, with some inconsistencies throughout the paper.
10 to 15 pts (50-75 out of 100)	Identifies and understands most of the main issues in the case study.	Thorough analysis of most of the issues.	Appropriate, well thought out comments about solutions or proposals for solutions to most of the issues in the case study.	Good research and documented links to the material read.	There are occasional errors. Good skill level in formatting and organizing material in assignment. Above average level of preparedness with few formatting errors.
16 to 20 pts (80-100)	Identifies and understands all the main issues in the case study.	Insightful and thorough analysis of all the issues.	Well documented, reasoned and pedagogically appropriate comments on solutions or proposals for solutions to all issues in the case study.	Excellent research into the issues with clearly documented links to the course text and/or outside readings.	Writing is totally free of errors. Meets all APA standards. Formatting is excellent.
Grade					

5. Module Requirements

A. Core Readings List

- A. Core Readings List**
- Arya, V., Naganathahalli, P., & Shukla, S. (2019, June). A Blockchain Framework for PropTech: Success Model Through Disintermediation and Self-regulation. *In International Conference on Intelligent Computing, Information and Control Systems (pp. 522-528)*. Springer, Cham.
- Baum, A. (2017). PropTech 3.0: The Future of Real Estate.
- Cermeño, J. S. (2016). Blockchain in Financial Services: Regulatory Landscape and Future Challenges for Its Commercial Application. *BBVA Research Paper*, 16, 20.
- Chohan, U. W. (2018). *Oversight and Regulation of Cryptocurrencies: BitLicense*.

6. Ducas, E., & Wilner, A. (2017). The Security and Financial Implications of Blockchain Technologies: Regulating Emerging Technologies in Canada. *International Journal*, 72(4), 538-562.
7. Finck, M. (2018). *Blockchain Regulation and Governance in Europe*. Cambridge University Press.
8. Girasa, R. (2018). *Regulation of Cryptocurrencies and Blockchain Technologies: National and International Perspectives*. Springer.
9. Lee, D., & Deng, R. H. (2018). *Handbook of Blockchain, Digital Finance, and Inclusion: Cryptocurrency, FinTech, InsurTech, and Regulation*. Academic Press.
10. Lin, L., & Chen, C. C. (2020). The Promise and Perils of InsurTech. Forthcoming, *Singapore Journal of Legal Studies*.
11. Marano, P., & Noussia, K. (2020). *InsurTech: A Legal and Regulatory View*. Springer.
12. Rieger, A., Lockl, J., Urbach, N., Guggenmos, F., & Fridgen, G. (2019). Building a Blockchain Application that Complies with the EU General Data Protection Regulation. *MIS Quarterly Executive*, 18(4).
13. Yeung, K. (2019). Regulation by Blockchain: The Emerging Battle for Supremacy Between the Code of Law and Code as Law. *The Modern Law Review*, 82(2), 207-239.
14. Treleven, P., & Batrinca, B. (2017). Algorithmic Regulation: Automating Financial Compliance Monitoring and Regulation Using AI and Blockchain. *Journal of Financial Transformation*, 45, 14-21.
15. Zetsche, D. A., Buckley, R. P., Barberis, J. N., & Arner, D. W. (2017). Regulating a Revolution: From Regulatory Sandboxes to Smart Regulation. *Fordham J. Corp. & Fin. L.*, 23, 31.

B. Supplementary Reading List

1. Boreiko, D., Ferrarini, G., & Giudici, P. (2019). Blockchain Startups and Prospectus Regulation. *European Business Organization Law Review*, 20(4), 665-694.
2. Grima S., Spiteri J., Romanova I. (2020) The Challenges for Regulation and Control in an Environment of Rapid Technological Innovations. In: Marano P., Noussia K. (eds) *InsurTech: A Legal and Regulatory View. AIDA Europe Research Series on Insurance Law and Regulation, Vol 1*. Springer, Cham. https://doi.org/10.1007/978-3-030-27386-6_4
3. Siniak, N., Kauko, T., Shavrov, S., & Marina, N. (2020, June). The impact of PropTech on Real Estate Industry Growth. In *IOP Conference Series: Materials Science and Engineering (Vol. 869, No. 6, p. 062041)*. IOP Publishing.

C. General Rules for Submitting Written Assignments

Prior to the assessment and grading, all homework assignments submitted via Virtual Learning Environment (VLE) are checked for plagiarism with the software embedded to the system. Before turning in the first assignment, each student must familiarize themselves with the Plagiarism Handbook in the VLE.

Written assignments should be typewritten and will only be marked and graded if they are submitted via VLE by the requested time. **Late submissions will not be accepted under any circumstances!** *Being virtually absent shall not be an accepted excuse for not submitting the required homework for the following session.*

Technical issues: The VLE system works functionally well and technical issues almost non-existent. Failure to submit the assignment on a timely basis is typically a result of a misuse of the VLE instructions or simply a missed deadline.

In case a student experiences issues with the submission of a particular assignment, an email should be sent before the submission deadline to the lecturer (with a copy to the Academic Coordinator) along with the screenshot of the technical issue. Each case will be thoroughly investigated, and the ultimate decision will be made by the Academics Department whether the homework should be accepted for evaluation and grading.

D. Attendance

80% attendance is compulsory. Students who miss more than 20% of classes without a justified reason (e.g., medical certificate) will automatically fail the module.

All appointments, including regular medical appointments, should be scheduled outside of class time, as any absence will affect the participation component of the module evaluation. If you are ill and you cannot attend a class, you will need to fill in the Absence Excuse form and provide a valid certificate from a credible medical institution. Under no circumstances is the lecturer involved in considering absence excuses. This responsibility lies with the Academic Coordinator and the Academic Committee. Please refer to the **Academic Policies and Student Guidelines** for further information.

Students who are late (not more than the first 10 minutes) will be allowed to enter the classroom upon the consideration of a lecturer meaning that if a lecturer started the class and believes that those arriving late may disturb the class, he/she has a right not to allow any late students to enter the classroom. Students over 10 minutes late should NOT be allowed into the classroom until the next break. In case the student is not allowed to enter the classroom in the first part of the class or is late more than 10 min, then the attendance will be rated at **50%** or a half class. This margin of time is not applicable after the mid-class break, i.e., students coming late or not returning after the break will not be allowed into the class and/or will get documented only 50% of presence. Continuous late arrivals by a student gives the lecturer the right to dismiss that student from their class, with a failing grade.

Note: *As entering in the middle of a class session disrupts the entire class and is regarded as disrespectful, students should strictly adhere to the rules. Arriving late or leaving early will be noted and the total time of absences will be calculated by applying the same corresponding rules for continuous tardiness*