

Dipartimento di INFORMATICA

Piano di lavoro funzionale alla redazione del piano di lavoro preventivo individuale del docente

Anno Scolastico 2018-2019

Disciplina: GESTIONE ORGANIZZAZIONE IMPRESA

Quinto anno: TUTTE LE CLASSI QUINTE DELL'INDIRIZZO INFORMATICO

Competenze disciplinari di riferimento:

La disciplina "Gestione progetto, organizzazione di impresa" concorre a far conseguire allo studente al termine del percorso quinquennale i seguenti risultati di apprendimento relativi al profilo educativo, culturale e professionale dello studente:

orientarsi nella normativa che disciplina i processi produttivi del settore di riferimento, con particolare attenzione sia alla sicurezza sui luoghi di vita e di lavoro sia alla tutela dell'ambiente e del territorio; riconoscere gli aspetti di efficacia, efficienza e qualità nella propria attività lavorativa; padroneggiare l'uso di strumenti tecnologici con particolare attenzione alla sicurezza nei luoghi di vita e di lavoro, alla tutela della persona, dell'ambiente e del territorio; riconoscere e applicare i principi dell'organizzazione, della gestione e del controllo dei diversi processi produttivi.

I risultati di apprendimento sopra riportati in esito al percorso quinquennale sostituiscono il riferimento delle attività didattiche della disciplina nel quinto anno.

La disciplina, nell'ambito della programmazione del Consiglio di classe, concorre in particolare al raggiungimento dei seguenti risultati di apprendimento, relativi all'indirizzo, espressi in termini di competenza:

- Conoscere ed applicare le metodologie "AGILI" e le tecniche della gestione per progetti di sviluppo software tipici dell'ingegneria del software.
- Conoscere ed utilizzare piattaforme per la gestione del "VERSIONING SOFTWARE" nello sviluppo di progetti applicativi.
- Gestire progetti secondo le procedure e gli standard previsti dai sistemi aziendali di gestione della qualità.
- Utilizzare e produrre strumenti di comunicazione visiva e multimediale, anche con riferimento alle strategie espressive ed agli strumenti tecnici della comunicazione in rete.
- Utilizzare le reti e gli strumenti informatici nelle attività di studio, ricerca ed approfondimento disciplinare.
- Utilizzare le metodologie innovative EducaLean nelle attività di studio, ricerca ed approfondimento disciplinare.
- Redigere relazioni tecniche e documentare le attività individuali e di gruppo relative a situazioni professionali.

La disciplina promuove la riorganizzazione delle abilità e delle conoscenze multidisciplinari utili alla conduzione di uno specifico progetto esecutivo del settore ICT, mediante l'applicazione di metodi di problem-solving propri dell'ingegneria del software; gli esempi proposti si riferiscono preferibilmente alle attività di progettazione e sviluppo oggetto delle altre discipline tecniche dell'articolazione.

I contenuti disciplinari vengono proposti in modalità "CLIL- EducaLean- Flipped classroom" e pertanto subiranno un necessario adattamento alle esigenze didattiche secondo un Piano di apprendimento redatto secondo le specifiche CLIL e in lingua inglese.

Per le attività laboratoriali nel corso dell'intero anno scolastico è previsto lo sviluppo di progetti interdisciplinari corredati da specifiche UDA allegate al piano preventivo che vengono comunque svolte nella modalità CLIL e applicando alla gestione del progetto la metodologia Agile SCRUM approfondite nel percorso di studi.

Le Priorità del Piano Nazionale di Formazione Docente contemplate dal presente Piano Preventivo di Dipartimento sono:

N. 4.2 Didattica per competenze, innovazione metodologica e competenze di base

N. 4.3 Competenze digitali e nuovi ambienti di apprendimento

N. 4.4 Competenze di lingua straniera

COMPETENZE	
Aims/Objectives – language	<ul style="list-style-type: none"> • Understand a written text both globally and analytically (reading) • Write a declarative and/or argumentative text on the topic of the TU (writing) • Create explanatory charts and diagrams (writing) • Report with arguments one’s knowledge on the subject from experience (speaking) • Answer comprehension questions about written text or projects requirements (speaking) • Identify key info from audio material to perform post-listening written and oral activities (listening) • Use specific vocabulary for the topic • Know the correct definition of single terms • Use the specific vocabulary of the subject in oral and/or written production about the topic
Objectives – study/learning skills	<ul style="list-style-type: none"> • Plan one’s work • Identify new key concepts • Self-evaluate one’s learning outcomes • Enhance the capacity to take the initiative for the organization of the autonomous work as well as the teamwork • Test and improve one’s ability to work in team • Identify and explain cause/effect relationships • Create charts to relate concepts to definitions • Search for information, analyze and summarize them, using different sources both in mother tongue and in English • Acquire of the capacity to learn autonomously • Have the capacity to communicate technical matters both orally and in writing in mother tongue and in English • Became skilled using IT tools to search and manage information • Record and analyze data • Make predictions and communicate results • Read and interpret documents and communicate project solutions to specialized and non-specialized audiences

<p>Cross – curricular objectives</p>	<ul style="list-style-type: none"> • Promote ethical behaviors • Learning method • Focusing on objectives achievement • Time and information management skills • Ability to organize their own learning, both individually and in groups • Team working skills • Problem solving skills • Project management skills • Project development skills with a top-down approach • Critical thinking skills • Project requirements analysis skills
--------------------------------------	--

<i>Conoscenze</i>	<i>Abilità</i>	<i>Competenze specifiche</i>
	<p>Use Web 2.0 utilities</p> <p>Use English Courses for Education</p>	<p>Watch Videos from the web</p> <p>Making decisions about teams and their managing</p> <p>Calculate the necessary resources in order to accommodate the requirements of a project</p> <p>Create test/assessment items and evaluation grids</p> <p>Develop UDA Projects based on cooperative-learning</p>
<p>TU1: Agile software development methodologies: SCRUM:</p> <ol style="list-style-type: none"> 1) Introduction to Scrum and his structure 2) Roles, Artifacts and Meetings 3) Backlog Refinement Meeting 4) Sprint Planning Meeting 5) Daily Scrum Meeting 6) Sprint Review Meeting 7) Sprint Retrospective Meeting 8) Scrum pro and cons 	<ol style="list-style-type: none"> 1) Apply the Scrum methodology in team working 2) Perform planned practice activities and exercises 3) Describe the structure of the Agile Software Development Methods 4) Compare the characteristics and uses of Scrum and Waterfall methodology 5) Explain the Scrum Methodology 	<ol style="list-style-type: none"> 1) Describe a Software Development Project using agile tools 2) Using the Scrum methodology and working in team

<p>9) Agile Planning with Team Forge</p>	<p>6) Describe purpose and benefits of Agile Development</p>	
<p>TU2: Software Version Control and Development Collaboration with GIT & GITHUB</p> <p>1) Why use Git 2) Installing Git 3) How Git works 4) Creating a Repository 5) Staging files 6) Making Commits 7) Undoing Things 8) Branches 9) Merging Branches (& conflicts) 10) Introduction to GitHub 11) Collaborating on GitHub 12) Forking (& Contributing)</p>	<p>1) Describe a Software Development platform 2) Describe purpose and structure of Git and GitHub 3) Describe the benefits of Git and GitHub 4) Explain the Git and GitHub Tools 5) Explain when Git and GitHub can be used</p>	<p>1) Compare the characteristics and uses of Git and GitHub 2) Making decisions about Development Management and Software Versions 3) Using the repository of Git and GitHub and working in team</p>
	<p>1) Building an execution plan for a business model 2) Search for the actual business model 3) Prepare your own team's business model 4) Validating ideas early on with real-life customers. 5) Search for the real pain points and unmet needs of customers. 6) Find a proper solution and establish a suitable business model.</p>	<p>1) Share work and experience 2) Get feedbacks 3) Prepare a customer contact/visit list 4) Search for new businesses 5) Organize the thinking 6) Capture hypothesis using Business Model Canvas 7) Develop and test ideas by gathering massive amounts of customer and marketplace feedback.</p>

Strumenti didattici:

Libri di testo e/o dispense fornite dal docente, appunti, lavagna tradizionale, LIM, attrezzatura hardware e software di laboratorio, piattaforme di apprendimento on-line.

Metodologie didattiche:

La seguente programmazione didattica verrà proposta agli alunni attraverso lo sviluppo di Unità di Apprendimento. Tali percorsi didattici ottemperano alla necessità di fornire agli alunni conoscenze che spesso appartengono, vista la natura trasversale della disciplina “Tecnologie e progettazione di sistemi informatici”, ad ambiti diversi se pur affini e talvolta presuppongono apporti da altre materie (Sistemi e reti, informatica, telecomunicazioni). È inoltre importante rendere la disciplina meno teorica possibile, dando agli alunni la possibilità di affrontare la soluzione di problemi reali, seppur elementari e legati a tematiche circoscritte, ma proposti in modo rigoroso.

Le metodologie didattiche che il singolo docente può implementare sono:

- Accertamento dei prerequisiti
- Attività partecipata in classe e video-lesson a casa (metodologia flipped classroom)
- Esercitazioni/UDA guidate dal docente teoriche e pratiche (problem solving)
- Esercitazioni individuali e/o in gruppi omogenei e non, teoriche e pratiche (learning by doing; cooperative learning).
- Interventi di consolidamento e/o approfondimento sui contenuti disciplinari trattati in L2
- Stesura di relazioni sulle esperienze effettuate con strumenti multimediali
- Interventi di consolidamento e/o approfondimento
- Uscite didattiche

Modalità di recupero/sostegno:

In itinere mediante interventi del docente durante le ore di laboratorio, in modalità alla pari (peer to peer) mediante lavoro di gruppo dove gli alunni più capaci e con buone doti di comunicazione supportano in compagni in difficoltà.

Numero e tipologie di prove di verifica:

Almeno tre prove “sommative” per quadrimestre costituite da test ed esercizi o problemi per la verifica di conoscenze e abilità, Verifiche formative in itinere: prove semi-strutturate Valutazione delle attività di laboratorio, individuali e/o di gruppo e delle relazioni/presentazioni multimediali relative a tali esperienze

Criteri di valutazione verifiche:

Scritte:

- Linguaggio L2 appropriato
- Conoscenza dei concetti e delle tecniche/metodologie
- Correttezza dell'esercizio
- Completezza dell'esercizio
- Leggibilità dell'elaborato
- Capacità di utilizzare le conoscenze in situazioni nuove

Orali:

- Linguaggio L2 appropriato
- Conoscenza dei concetti
- Correttezza dell'esposizione
- Completezza dell'esposizione
- Capacità di trovare soluzioni/espressioni equivalenti

- Capacità di applicare le conoscenze a situazioni nuove
- Capacità di trovare esemplificazioni
- Capacità di correlare argomenti

Progetti e/o AreaLab:

- Correttezza e completezza delle singole fasi della metodologia EducaLean
- Capacità di argomentare le soluzioni trovate e le ipotesi di lavoro
- Capacità di confrontare soluzioni alternative
- Leggibilità e completezza della documentazione i L2
- Organizzazione complessiva del progetto

Pratiche:

- Capacità di utilizzare strumenti informatici
- Conoscenza dei procedimenti
- Capacità di realizzare un prodotto funzionante e ben documentato in L2

Individuazione degli obiettivi minimi:

Gli obiettivi minimi declinati per conoscenze ed abilità sono stati evidenziati in grassetto nella tabella relativa alle competenze.

UNITÀ DI APPRENDIMENTO

Il seguente documento comprende:

PROSPETTO UDA
CONSEGNA AGLI STUDENTI
PIANO DI LAVORO
SCHEMA RELAZIONE INDIVIDUALE
RUBRICHE VALUTATIVE

UDA

UNITA' DI APPRENDIMENTO	
Denominazione	Software Project Development with Scrum and Project Documentation in L2
Prodotti/compiti autentici	Sviluppo di un progetto software con la metodologia Scrum e produzione della opportuna documentazione in L2 (CLIL)
Competenze chiave (e relative competenze specifiche: culturali, sociali, metodologiche)	Evidenze osservabili
Modellare una realtà	Capacità di analisi
Documentare	Documentazione del processo e del codice: organizzazione del documento, linguaggio L2 utilizzato
Relazionare	Linguaggio utilizzato, rispetto dei tempi di esposizione, modalità di presentazione
Abilità (in ogni riga gruppi di abilità conoscenze riferiti ad una singola competenza)	Conoscenze (in ogni riga gruppi di conoscenze riferiti ad una singola competenza)
<ul style="list-style-type: none"> • Analizzare i tipi di documenti utilizzati nello sviluppo del software • Pianificare gli scopi, gli obiettivi, le caratteristiche, i requisiti, l'architettura di un progetto software. • Stimare le risorse, la componente finanziaria, i termini di consegna, il piano dei test di un progetto software. • Prevedere e documentare i rischi, la componente qualitativa e gli ostacoli relativi ad un progetto software. 	<p>Conoscere ed utilizzare i template per documentare il Processo in L2:</p> <ul style="list-style-type: none"> • Vision Statement • Software Requirements Specification (SRS) • Software Project Management Plan (SPMP) • Release Plan • Iteration Plan • Memo of Understanding • Project Success Criteria • Project Closure Report • Status Report <p>Conoscere ed utilizzare i template per documentare il Prodotto:</p> <ul style="list-style-type: none"> • Architecture and Design • Coding Standards • Test Plan • Test Case Specification • User Guide • System Documentation
<ul style="list-style-type: none"> • Utilizzare la metodologia Scrum per lo sviluppo del progetto software 	Conoscere la metodologia Scrum e saperla applicare nello sviluppo in team
Utenti destinatari	Alunni della classe quinta GPI – altre materie di indirizzo
Fasi di applicazione (attività)	Fase 1: Informazioni teoriche sul concetto di documentazione del software Fase 2: Analisi dei Template per la documentazione e individuazione delle componenti da compilare Fase 3: Redigere i documenti di progetto appropriati in lingua L2 Fase 4: La progettazione e lo sviluppo del progetto software applicando la metodologia Scrum Fase 5: Specifico progetto software proposto dai docenti delle materie di indirizzo (Informatica, TPI) Fase 6: Relazione finale di progetto
Tempi	Ore di laboratorio di GPI durante l'anno scolastico
Esperienze attivate (cosa fa l'allievo)	Analisi del tracciato dei documenti con i compagni e confronto delle soluzioni proposte Realizzazione dei documenti (in laboratorio attività in team) Creazione dei Backlog per il progetto e della Scrum Board Utilizzo della lingua L2 per tutte le attività correlate al progetto ed alla sua documentazione
Metodologia (cosa fa il docente)	I docenti - guidano la classe nella discussione - forniscono materiale (presentazioni prodotte dal docente, esempi pratici di documenti reali ecc.) - propongono esercizi sulla base di documenti reali forniti agli studenti - preparano l'ambiente di lavoro in laboratorio - supportano la fase di sviluppo con la metodologia Scrum
Risorse umane interne esterne	Docenti delle discipline INFORMATICA- TPI- GPI
Strumenti	Software specifico, IDE e cartelloni per la metodologia Scrum
Valutazione	Vengono valutati i materiali prodotti e il prodotto software realizzato

LA CONSEGNA AGLI STUDENTI

Per "consegna" si intende il documento che l'équipe dei docenti/formatori presenta agli studenti, sulla base del quale essi si attivano realizzando il prodotto nei tempi e nei modi definiti, tenendo presente anche i criteri di valutazione.

1ª nota: il linguaggio deve essere accessibile, comprensibile, semplice e concreto.

2ª nota: l'Uda prevede dei compiti/problemi che per certi versi sono "oltre misura" ovvero richiedono agli studenti competenze e loro articolazioni (conoscenze, abilità, capacità) che ancora non possiedono, ma che possono acquisire autonomamente. Ciò in forza della potenzialità del metodo laboratoriale che porta alla scoperta ed alla conquista personale del sapere.

3ª nota: l'Uda mette in moto processi di apprendimento che non debbono solo rifluire nel "prodotto", ma fornire spunti ed agganci per una ripresa dei contenuti attraverso la riflessione, l'esposizione, il consolidamento di quanto appreso.

CONSEGNA AGLI STUDENTI

Titolo UdA: Software Project Development with Scrum and Project Documentation in L2

Cosa si chiede di fare:

In virtù della nota n.2 cit. <<l'Uda prevede dei compiti/problemi che per certi versi sono "oltre misura" ovvero richiedono agli studenti competenze e loro articolazioni (conoscenze, abilità, capacità) che ancora non possiedono, ma che possono acquisire autonomamente. Ciò in forza della potenzialità del metodo laboratoriale che porta alla scoperta ed alla conquista personale del sapere>>, viene fornita una presentazione che contiene le specifiche di documentazione richieste, template e documenti reali di esempio che gli studenti utilizzeranno come modelli per la documentazione da riprodurre.

Le attività previste sono:

- 1) Analizzare il tracciato dei documenti di progetto, individuate le componenti necessarie e giustificate le scelte
- 2) Modellizzare la soluzione dei documenti necessari utilizzando i template
- 3) Utilizzare il linguaggio L2 per ogni documento
- 4) Scrivere il codice nel linguaggio di sviluppo scelto e gli eventuali framework necessari
- 5) Sviluppare una breve presentazione in L2 del progetto realizzato

In che modo (singoli, gruppi.):

Si utilizza una modalità di lavoro in team con l'uso della metodologia Scrum.

Quali prodotti:

Al termine del lavoro, oltre al prodotto software, dove essere consegnato un portfolio contenente tutta la documentazione relativa allo specifico progetto in lingua L2, i Backlog degli Sprint e tutte le burndown chart prodotte durante lo sviluppo in team con la metodologia SCRUM.

Dove inoltre essere inoltre prodotta una relazione descrittiva dell'attività svolta e una breve presentazione (non più di 7 slide).

Che senso ha (a cosa serve, per quali apprendimenti):

L'obiettivo è quello di avere una visione completa dell'intero processo di documentazione di progetto, applicare in modo rigoroso la metodoloiga Scrum ed utilizzare la lingua L2.

Tempi:

Le ore di laboratorio dell'anno scolastico delle discipline coinvolte.

Risorse (strumenti, consulenze, opportunità...)

Risorse interne.

Criteri di valutazione:

Verranno valutate tutte le attività svolte ed i documenti prodotti.

PIANO DI LAVORO UDA

UNITÀ DI APPRENDIMENTO: Software Project Development with Scrum and Project Documentation in L2
Coordinatore: Cobello e i docenti di indirizzo delle classi quinte
Collaboratori : insegnanti di laboratorio delle materie di indirizzo

PIANO DI LAVORO UDA SPECIFICAZIONE DELLE FASI

Fasi	Attività (cosa fa lo studente)	Metodologia (cosa fa il docente)	Esiti	Tempi	Strumenti per la Valutazione	Evidenze per la valutazione
Fase 1:	acquisire il concetto documentazione di progetto	dialogo guidato		2 ore	Partecipazione, il linguaggio L2	Relazione di sintesi
Fase 2:	Analisi dei template utilizzabili come traccia	Organizza i gruppi e coordina e guida l'analisi		2 ore	Osservazione dei team durante l'analisi dei documenti	Relazione di sintesi
Fase 3:	Compilazione dei documenti di processo e di prodotto durante lo sviluppo software	Spiega i concetti base coinvolti in questa fase e fornisce materiali autentici		Ore di laboratorio per tutta la durata del progetto	Osservazione durante la creazione della documentazione di progetto	Documenti di progetto in L2
Fase 4:	Utilizzo della metodologia Scrum durante le attività di sviluppo software in team	Nel ruolo di Scrum Master supporta i team nel ruolo di facilitatore e mediatore durante le attività di sviluppo e documentazione		Ore di laboratorio per tutta la durata del progetto	Osservazione del processo di sviluppo con la metodologia Scrum	Backlog e burndown chart prodotti dai team
Fase 5:	Progettazione e sviluppo software del progetto	Interviene mettendo a fuoco i concetti di base di propria competenza coinvolti in questa fase		Ore di laboratorio per tutta la durata del progetto	Osservazione del software sviluppato dal team	Funzionamento del prodotto software sviluppato
Fase 6	Relazione finale	Assiste e guida i gruppi		2 ore	Capacità di relazionare in L2	Portfolio della documentazione prodotta

PIANO DI LAVORO UDA DIAGRAMMA DI GANTT

Fasi	Tempi			
	Settimana1	Settimana2	Durata del progetto	Ultima settimana
1				
2				
3				
4				
5				
6				

SCHEMA DELLA RELAZIONE INDIVIDUALE dello studente

INDIVIDUAL REPORT

Describe the general path of the activity

Speak about your task and how you did it

Highlight which difficulties you had to face and how you resolved them

What you learn during this Learning Unit

What you have still learn

How you assess your work

RUBRICA VALUTATIVA DEL PROCESSO

Indicazioni di lavoro

Prendere in visione i livelli di competenza come vengono descritti nella certificazione delle competenze del modello MIUR e l'esempio riportato sotto.

Descrivere i livelli di competenza attesi per ciascuna evidenza che si intende valutare.

Livelli di certificazione delle competenze (modello EQF; secondaria secondo grado)

Competenze: Nel contesto del Quadro europeo delle Qualificazioni, le competenze sono descritte in termini di responsabilità e autonomia

Livello	Indicatori esplicativi
EQF 4	Sapersi gestire autonomamente, nel quadro di istruzioni, in un contesto di lavoro o di studio, di solito prevedibili, ma soggetti a cambiamenti. Sorvegliare il lavoro di routine di altri, assumendo una certa responsabilità per la valutazione e il miglioramento di attività lavorative o di studio.
EQF 3	Assumere la responsabilità di portare a termine compiti nell'ambito del lavoro o dello studio. Adeguare il proprio comportamento alle circostanze nella soluzione dei problemi.
EQF 2	Lavoro o studio, sotto la supervisione, con un certo grado di autonomia.
EQF 1	Lavoro o studio, sotto la diretta supervisione, in un contesto strutturato.

Il Dirigente Scolastico

Dott.ssa Gabriella Piccoli

TEACHER/STUDENT VERSION - CLIL TEACHING PLAN - PART 1

School	I.T.I.S. G. Marconi - Verona
Teacher	Cobello Grazia
Class involved	5 th classes of Computer Science
Subjects Involved	Agile Software Engineering - SCRUM
Class language skill level	B1/B2
National Teaching Training Plan Priorities – LA BUONA SCUOLA	N.2 Teaching based on skills and methodological innovation N.3 Digital skills and new environments for learning N.4 Foreign language skills
Teaching Methodologies	CLIL FLIPPED CLASSROOM EducaLEAN – SCRUM Team Learning
EducaLEAN work organization	<ul style="list-style-type: none">• Backlog (what to do)• Learn at home• Apply at school & alignment• Verify and assessment phase
Project phases:	<ul style="list-style-type: none">• Warming-up and Motivation phase• Introduction and practice• Practice and consolidation• Summing-up phase• Testing methods of assessment and self-assessment• Remedial and Reinforcement phase
Resources, Location, Materials	<ul style="list-style-type: none">• School Moodle Platform• Online Platforms• Web 2.0 tools• Classroom with White Board• Scrum Billboards• Post-it• Physical labs equipped with White Board and computers (connected to the LAN and to Internet)• Multimedia Presentations• Multimedia Video• Test on paper and on line

TEACHER/STUDENT VERSION- CLIL TEACHING PLAN - PART 2

Module Title	Agile software development methodologies: SCRUM
Teaching Units - Sprints	<ol style="list-style-type: none">1) Introduction to Scrum and his structure2) Roles, Artifacts and Meetings3) Backlog Refinement Meeting4) Sprint Planning Meeting5) Daily Scrum Meeting6) Sprint Review Meeting7) Sprint Retrospective Meeting8) Scrum pro and cons9) Agile Planning with Team Forge
Teacher	Cobello Grazia
Discipline	Project Management and Software Engineering
Timeline	See the time-table below
Contents	<ul style="list-style-type: none">• TU1 Introduction to Scrum and his structure• TU2 Roles, Artifacts and Meetings• TU3 Backlog refinement meeting: Product Backlog Item (PBI), Epics and User Stories, Effort Levels, prioritizing the Backlog, estimating the User Story.• TU4 Sprint planning meeting: Sprint planning overview (two weeks sprint), A two part meeting (moving P.B.I's and creating Sprint Tasks)• TU5 Daily Scrum meeting (Daily Standup): the three questions, good practices in the daily standup.• TU6 Sprint Review meeting: Sprint Review Overview, the agenda, demonstration, velocity, feedback,• TU7 Sprint Retrospective meeting: honest reviews, tips• TU8 Opinions on Scrum: positives and negatives• TU9 Agile Planning with TeamForge
Materials	<ul style="list-style-type: none">• PowerPoint/Prezi/Emaze/ Spark.adobe Presentations prepared by students• Videos from the web• Activities and exercised prepared by teacher or students• Lab Projects based on cooperative-learning

Relevant web-bibliography	<ul style="list-style-type: none"> • Learn Scrum–Agile Software Development – Scrum Tutorial: https://www.tutorialspoint.com/scrum/index.htm • Scrum Training Series: Free Online Scrum Master Training From Seattle http://scrumtrainingseries.com/ • The Scrum Guide™: The Definitive guide to Scrum: The Rules of the Game https://www.scrumguides.org/docs/scrumguide/v1/scrum-guide-us.pdf
Relevant bibliography	<ul style="list-style-type: none"> • Agile Retrospectives: Making Good Teams Great By Esther Derby, Diana Larsen and Ken Schwaber • The Scrum Field Guide: Practical Advice For Your First Year by Mitch Lacey • Essential Scrum: A practical guide to the most popular Agile Process by Kenneth S. Rubin • Scrum: The art of doing twice the work in half the time by Jeff Sutherland • Scrum Shortcuts without cutting corners: Agile tactics, tools & tips by Ilan Goldstein
Pre-requisites - content	<ul style="list-style-type: none"> • Team working habits • Web 2.0 tools • High Level Language Development skills
Prerequisites - language	B1/B2 reading, writing, speaking and listening skills
Aims/Objectives – content	<p>Upon completion of this module, students will be able to:</p> <ul style="list-style-type: none"> • Describe the structure of the Agile Software Development Methods • Describe the purpose of the Agile SCRUM • Compare the characteristics and uses of Scrum and Waterfall methodology • Use Presentation Web 2.0 utilities • Explain what a Sprint is • Describe a Software Development Project using agile tools • Making decisions about teams and their managing • Calculate the necessary resources in order to accommodate the requirements of a project • Describe the benefits of Agile Development • Explain the Scrum Methodology • Using the Scrum methodology and working in team • Create test/assessment items and evaluation grids

<p>Aims/Objectives – language</p>	<ul style="list-style-type: none"> • Understand a written text both globally and analytically (reading) • Write a declarative and/or argumentative text on the topic of the TU(writing) • Create explanatory charts and diagrams(writing) • Report with arguments one’s knowledge on the subject from experience(speaking) • Answer comprehension questions about written text or projects requirements(speaking) • Identify key info from audio material to perform post-listening written and oral activities(listening) • Use specific vocabulary for the topic • Know the correct definition of single terms • Use the specific vocabulary of the subject in oral and/or written production about the topic
<p>Objectives – study/learning skills</p>	<ul style="list-style-type: none"> • Plan one’s work • Identify new key concepts • Self-evaluate one’s learning outcomes • Enhance the capacity to take the initiative for the organization of the autonomous work as well as the teamwork • Test and improve one’s ability to work in a team • Identify and explain cause/effect relationships • Create charts to relate concepts to definitions • Search for information, analyze and summarize them, using different sources both in mother tongue and in English • Acquire of the capacity to learn autonomously • Have the capacity to communicate technical matters both orally and in writing in mother tongue and in English • Became skilled using IT tools to search and manage information • Record and analyze data • Make predictions and communicate results • Read and interpret documents and communicate project solutions to specialized and non-specialized audiences
<p>Cross – curricular objectives</p>	<ul style="list-style-type: none"> • Promote ethical behaviors • Learning method • Focusing on objectives achievement • Time and information manage mental skills • Ability to organize their own learning, both individually and in groups • Team working skills • Problem solving skills • Project management skills • Project development skills with a top-down approach • Critical thinking skills • Project requirements analysis skills

Procedures (classroom management)	<ul style="list-style-type: none"> • Promote students involvement and motivation • Set clear learning objectives • Set clear rules and procedures • Capture students' attention changing learning activities when necessary • Provide frequent results feedback • Promote cooperative learning and positive relationships among students • Establish a productive working environment (proper and efficient management of space, equipment) • Promote effective communication and exchange of information among students • Maintain a positive attitude and self-control • Organize and plan carefully every class activity
Assessment	<ul style="list-style-type: none"> • Establish clear criteria and procedures of evaluation • Plan in advance periodic, midterm and final assessments according to the learning objectives • Promptly communicate the evaluation results • Do not penalize linguistic errors • Use different evaluation methods (diagnostic, summative and formative assessments, portfolios, self and peer-assessments)
Remedial work / reinforcement	<ul style="list-style-type: none"> • Plan carefully timing and activities for consolidation, recovery and enhancement of skills, using cooperative learning activities.

TEACHER/STUDENT VERSION - CLIL TEACHING PLAN - PART 3

Teaching Unit 0: Work and team organization (2 hours)

Content Objectives:

- Introduction to the EducaLEAN methodology and team organization

Language Objectives:

- Specific vocabulary of the topic
- Present, past and future forms
- Modal verbs
- Comparative structure
- Hypothetical structure
- Making predictions with will
- Passive forms

Skills / study skills:

- Cause-effect relationships
- Making predictions
- Identification of characteristics
- Comparing different situations
- Predicting and reasoning on problems related to the topic
- Guessing and then explaining (why questions)

Subject specific assessment criteria:

- Problem-solving (the students are able to solve problems with accuracy, creativity and originality)
- Content knowledge (students show skills related to content and task)
- Development of concept (students show understanding of concepts regarding the content and when and where to apply this knowledge with cross-curricular connections)
- Quality of reflection (depth of reflection) and critical thinking
- Organization of their own and others' work
- Use of the language (the students are tested on their ability to use academic language)

and the technical vocabulary)

- Communication skills: students should be able to give accurate information about the work done and about the subject (share knowledge and ideas in peer tutoring, justify opinions, explain the steps taken to carry out a task)
- Individual behavior (students show their ability to work independently and with perseverance)
- Group behavior (students communication skills, willing to share ideas, and the ability of providing feedback to other students on the quality of their work), social interaction(work collaboratively in groups, constructive management of feelings and relationships)
- Creativity, initiative and attitude towards the subject that is being assessed
- Learning to learn ability and cultural and civic awareness
- Decision taking ability
- Self-assessment and goal setting

For the Self-Assessment grid, see the assessment grids section (below)

Step 1
Warming up and
motivation phase
(lead in)

Activities:

- **Brainstorming:** The students are asked questions that recall previous knowledge and are prompted to make predictions.

Some questions:

What is EducaLEAN?

Have you ever heard anything about Agile Development or Scrum?

- Presentation of a single slide about flipped classroom, CLIT (Content and Language Integrated Testing) and the assessment grid (provided below).

The teacher asks students some questions in order to recall previous knowledge and introduces:

- The list of new contents and activities
- what students will be able to do after the UD
- what language support will be needed for communication of content, thinking and learning
- which additional materials and resources will be provided to present the content and support any tasks

Work:

- The class will be divided in team of 3 members and all the work will be distributed.
- A PDF document about assessment items will be provided in order to understand what each team has to develop and how it will be assessed (see document “Test Items” on drive about many different types of assessment items such as

- quick-solution problems, Q
- fill the table/text, f
- text matching, t
- completion, c
- mistakes finding, m
- open/close questions, o
- role taking, r
- role making, r
- role play, r
- c

	<p>onsecution temporum,</p> <ul style="list-style-type: none"> • <p>erializing,</p> <ul style="list-style-type: none"> • <p>rite down notes).</p> <ul style="list-style-type: none"> • Each team has to choose two/three different assessment items and provide a final assessment with and without solutions (grades included) about the sprint backlog content. At the end of the sprint each student will take the final assessment provided by all the teams. • Work organization inside each team.
--	---

S

W

**TEACHER/STUDENT VERSION - CLIL TEACHING PLAN -
PART 3**

Teaching Unit 1:Introduction to Scrum and its structure (2 weeks)

Content Objectives:

- Investigate rules to follow while developing a product
- Understand a framework for incremental product development
- Comprehension of the key word “iterative”
- How Scrum works in general
- What are Sprints

Homework:

- A video about the introduction to SCRUM using the online platform and answer the question during the video watching.
<https://www.youtube.com/watch?v=NYBBRpFKI-Q>

Teaching Unit 2: Backlog Refinement Meeting (2 weeks)

Content Objectives:

- What is Scrum and how it works: introduction to Roles, Artifacts and Meetings.
- Roles: The Product Owner, the Development Team, the Scrum Master,
- Artifacts: the Product Backlog, the Sprint Backlog,
- Introduction to all the different meetings of Scrum
- Examples.

Homework:

- A video about the introduction to SCRUM using the online platform and answer the question during the video watching.
<https://www.youtube.com/watch?v=m-dbT8u6TJw>

Teaching Unit 3: Backlog Refinement Meeting (2 weeks)

Content Objectives:

- Understand what a Backlog is and what it contains.
- Understand what a Backlog Refinement is and how it works
- Understand what a Product Backlog Item is
- Refining P.B.I's into Epics and User Stories
- Effort Levels
- Prioritizing a Backlog
- Examples.

Homework:

- A video about the introduction to SCRUM using the online platform and answer the question during the video watching.
<https://www.youtube.com/watch?v=K2q7H3QXg3I>

Teaching Unit 4: Sprint planning meeting (2 weeks)

Content Objectives:

- Understand how to plan a Sprint
- Learning who to manage e meeting
- Indicate priorities as Product Owner
- Creating Sprint Tasks from a Sprint Backlog

- Assigning tasks and check when they are completed
- Examples.

Homework:

- A video about the introduction to SCRUM using the online platform and answer the question during the video watching.
<https://www.youtube.com/watch?v=X10HDmXSAaY>

Teaching Unit 5: Daily Scrum meeting (Daily Standup) (2 weeks)

Content Objectives:

- Understand how the team has to report to each other
- Learn how to promote collaboration
- Manage the meeting as Scrum Muster
- Know good practices
- Examples.

Homework:

- A video about the introduction to SCRUM using the online platform and answer the question during the video watching.
https://www.youtube.com/watch?v=RQ--Sells_g

Teaching Unit 6: Sprint Review meeting (2 weeks)

Content Objectives:

- Learning how demonstrate the potentially shippable product increment
- Declare what is done and demonstration
- Measure velocity
- Receive feedback from Stakeholders
- Examples.

Homework:

- A video about the introduction to SCRUM using the online platform and answer the question during the video watching.
https://www.youtube.com/watch?v=I_uz71nXkxc

Teaching Unit 7 - Sprint Retrospective meeting: honest reviews, tips (2 weeks)

Content Objectives:

- Understand how to produce a honest review
- Growing as a team
- Make sure everyone understands and contributes
- Share the experiences
- Examples.

Homework:

- A video about the introduction to SCRUM using the online platform and answer the question during the video watching.
<https://www.youtube.com/watch?v=G1Wtxm-klxI>

Teaching Unit 8: Opinions on Scrum: positives and negatives (2 weeks)

Content Objectives:

- Analyze what is positive and what is not about Scrum
- Consider the expert's opinions
- Examples.

Homework:

- A video about the introduction to SCRUM using the online platform and answer the question during the video watching.
<https://www.youtube.com/watch?v=HY1m-WxNck8>

Teaching Unit 9: Agile Planning with TeamForge (2 weeks)

Content Objectives:

- Analyze a real situation
- Examples.

Homework:

- A video about the introduction to SCRUM using the online platform and answer the question during the video watching.
https://www.youtube.com/watch?time_continue=81&v=d8FoHtMDfNs

Language Objectives:

- Specific vocabulary of the topic
- Present, past and future forms
- Modal verbs
- Comparative structure
- Hypothetical structure
- Making predictions with will
- Passive forms

Skills / study skills:

- Cause-effect relationships
- Making predictions
- Identification of characteristics
- Comparing different situations
- Predicting and reasoning on problems related to the topic
- Guessing and then explaining (why questions)

Subject specific assessment criteria:

- Problem-solving (the students are able to solve problems with accuracy, creativity and originality)
- Content knowledge (students show skills related to content and task)

- Development of concept (students show understanding of concepts regarding the content and when and where to apply this knowledge with cross-curricular connections)
- Quality of reflection (depth of reflection) and critical thinking
- Organization of their own and others' work
- Use of the language (the students are tested on their ability to use academic language and the technical vocabulary)
- Communication skills: students should be able to give accurate information about the work done and about the subject (share knowledge and ideas in peer tutoring, justify opinions, explain the steps taken to carry out a task)
- Individual behavior (students show their ability to work independently and with perseverance)
- Group behavior (students communication skills, willing to share ideas, and the ability of providing feedback to other students on the quality of their work), social interaction(work collaboratively in groups, constructive management of feelings and relationships)
- Creativity, initiative and attitude towards the subject that is being assessed
- Learning to learn ability and cultural and civic awareness
- Decision taking ability
- Self-assessment and goal setting

For the Self-Assessment grid, see the assessment grids section (below)

<p>Step 1 Warming up and motivation phase (lead in)</p>	<p>Class Activities:</p> <p>Short brainstorming: The students inside the team answer the three questions:</p> <ul style="list-style-type: none"> • What went wrong? • What can be improved? • What to do now? <p>The Scrum Muster asks the teams some questions in order to provide support and clarification about:</p> <ul style="list-style-type: none"> ○ The list of new contents and activities from backlog ○ What students will have to produce at the end of the UD ○ What language support will be needed for communication of content, thinking and learning, ○ Which additional materials and resources will be provided to present the content and support any tasks ○ The video contents <p>Homework:</p> <ul style="list-style-type: none"> • A video about the introduction to SCRUM using the online platform and answer the question during the video watching. <p>The students have to watch the video at home, alone or with the team classmates, and take notes about the specific language used, in order to ask clarifications during the class, and answer the teacher's questions. Students are invited to take notes and write down key words or phrases.</p>
---	--

<p>Step 2 Introduction and Practice</p>	<p>Activities:</p> <ul style="list-style-type: none"> • Each team develop the test items related to the content previously studied at home <p>The teacher explains the concepts, interacts with the students during the team working to reinforce the content and language comprehension, encourage communication and questions (such as requests for clarification).</p>
<p>Step 3 Practice and consolidation</p>	<p>Activities:</p> <ul style="list-style-type: none"> • Each student check the assessment items provided by one other team-mates and the related assessment grid • The team deliver the test items with and without solutions to the teacher
<p>Step 4 Summing up Phase</p>	<p>Activity 1:</p> <ul style="list-style-type: none"> • The students are asked to solve all the tests provided by the classmates, working in team, and then discuss their outcomes.
<p>Step 5 Testing Methods of assessment Self - assessment</p>	<p>Testing activities:</p> <ul style="list-style-type: none"> • Ongoing assessment <p>Each activity is monitored by the teacher for feedback on the learning process. Some activities are specifically meant as a form of self-assessment . The teacher observes the students while performing and evaluates the commitment of the students to the tasks and the correct execution of the same with memos in the register. Their performances in the oral presentation of the topic are evaluated according to the grid presented below.</p> <p>Testing activity 2:</p> <ul style="list-style-type: none"> • Written test <p>For the final evaluation, all the students will have to do take the final test They will use the files (without solution) prepared by all the teams and posted on the platform. The teacher will evaluate the students outcomes using the test files (with solutions) previously provided by the teams.</p>

TEACHER GUIDE - MODULE SCHEDULE

Week	Sprint	LECTURER-STUDENT CONTACT				AUTONOMOUS WORK		TOTAL HOURS	OBSERVATION	
		Lectures	Guided tasks	Subtot Hours	Duties	Hours				
1		1. Short presentation and brainstorming about the teaching plan (single slide overview in English) 2. Discussion about the SCRUM methodology and backlog presentation	0.30 0.30			1		2	3	
2	Each Sprint			1. Daily Scrum meeting 2. Test Items development (in classroom and at home) 3. Check and delivery 4. Solve the test items and team discussion 5. Self-assessment and final assessment	0.15 2 0.45 1 1	7	1. Homework: watching the video provided by the teacher about the Sprint subject 2. Test Items development and review	4 1	5	
		Lectures (h)	1	LAB guided tasks for 9 sprints (h)		63	Homework time for 9 sprints (h)		45	
				Total		64	Total		45	
		Total hours							109	

TEACHER/STUDENT VERSION- CLIL MODULE PLANNING - PART 2

Module Title	Software Version Control and Development Collaboration with GIT & GITHUB
Teaching Units - Sprints	<ol style="list-style-type: none">10) Why use Git11) Installing Git12) How Git works13) Creating a Repository14) Staging files15) Making Commits16) Undoing Things17) Branches18) Merging Branches (& conflicts)19) Introduction to GitHub20) Collaborating on GitHub21) Forking (& Contributing)
Teacher	Cobello Grazia
Discipline	Software Engineering and Development Tools
Timeline	See the time-table below
Contents	<ul style="list-style-type: none">• TU1 Introduction to Git• TU2 Installing Git• TU3 Working with Git• TU4 Using Repository• TU5 Staging files• TU6 Making commits• TU7 Undoing things• TU8 Creating Branches• TU9 Merging Branches and Manage Conflicts• TU10 Introduction to GitHub• TU11 Collaborating on GitHub• TU12 Forking and Contributing
Materials	<ul style="list-style-type: none">• PowerPoint/Prezi/Emaze/ Spark.adobe Presentations prepared by students• Videos from the web• Activities and exercised prepared by teacher or students• Lab Projects based on cooperative-learning

Relevant web-bibliography	<p>Learn by reading:</p> <ul style="list-style-type: none"> • Git Handbook, 10 minute read - Tutorial: https://guides.github.com/introduction/git-handbook/ • Git Cheat Sheet – on demand training: https://services.github.com/on-demand/downloads/github-git-cheat-sheet/ <p>Learn by doing;</p> <ul style="list-style-type: none"> • Learn Git branching https://learngitbranching.js.org/ • Visualizing Git http://git-school.github.io/visualizing-git/ • Git-It https://github.com/jlord/git-it-electron#what-to-install
Relevant bibliography	<ul style="list-style-type: none"> • The Beginner’s Guide to GitHub by Thomas Mailund • GitHub for Windows Users by Microsoft Virtual Academy
Pre-requisites - content	<ul style="list-style-type: none"> • Team working habits • Web 2.0 tools • High Level Language Development skills
Prerequisites - language	B1/B2 reading, writing, speaking and listening skills
Aims/Objectives – content	<p>Upon completion of this module, students will be able to:</p> <ul style="list-style-type: none"> • Describe the structure of Git and GitHub • Describe the purpose of Git and GitHub • Compare the characteristics and uses of Git and GitHub • Use Presentation Web 2.0 utilities • Explain what Git and GitHub are and when are used • Describe a Software Development platform • Making decisions about Development Management and Software Versions • Calculate the necessary resources in order to accommodate the requirements of a project • Describe the benefits of Git and GitHub • Explain the Git and GitHub Tools • Using the repository of Git and GitHub and working in team • Create test/assessment items and evaluation grids

<p>Aims/Objectives – language</p>	<ul style="list-style-type: none"> • Understand a written text both globally and analytically (reading) • Write a declarative and/or argumentative text on the topic of the TU(writing) • Create explanatory charts and diagrams(writing) • Report with arguments one’s knowledge on the subject from experience(speaking) • Answer comprehension questions about written text or projects requirements(speaking) • Identify key info from audio material to perform post-listening written and oral activities(listening) • Use specific vocabulary for the topic • Know the correct definition of single terms • Use the specific vocabulary of the subject in oral and/or written production about the topic
<p>Objectives – study/learning skills</p>	<ul style="list-style-type: none"> • Plan one’s work • Identify new key concepts • Self-evaluate one’s learning outcomes • Enhance the capacity to take the initiative for the organization of the autonomous work as well as the teamwork • Test and improve one’s ability to work in a team • Identify and explain cause/effect relationships • Create charts to relate concepts to definitions • Search for information, analyze and summarize them, using different sources both in mother tongue and in English • Acquire of the capacity to learn autonomously • Have the capacity to communicate technical matters both orally and in writing in mother tongue and in English • Became skilled using IT tools to search and manage information • Record and analyze data • Make predictions and communicate results • Read and interpret documents and communicate project solutions to specialized and non-specialized audiences
<p>Cross – curricular objectives</p>	<ul style="list-style-type: none"> • Promote ethical behaviors • Learning method • Focusing on objectives achievement • Time and information manage mental skills • Ability to organize their own learning, both individually and in groups • Team working skills • Problem solving skills • Project management skills • Project development skills with a top-down approach • Critical thinking skills • Project requirements analysis skills

Procedures (classroom management)	<ul style="list-style-type: none"> • Promote students involvement and motivation • Set clear learning objectives • Set clear rules and procedures • Capture students' attention changing learning activities when necessary • Provide frequent results feedback • Promote cooperative learning and positive relationships among students • Establish a productive working environment (proper and efficient management of space, equipment) • Promote effective communication and exchange of information among students • Maintain a positive attitude and self-control • Organize and plan carefully every class activity
Assessment	<ul style="list-style-type: none"> • Establish clear criteria and procedures of evaluation • Plan in advance periodic, midterm and final assessments according to the learning objectives • Promptly communicate the evaluation results • Do not penalize linguistic errors • Use different evaluation methods (diagnostic, summative and formative assessments, portfolios, self and peer-assessments)
Remedial work / reinforcement	<ul style="list-style-type: none"> • Plan carefully timing and activities for consolidation, recovery and enhancement of skills, using cooperative learning activities.

TEACHER/STUDENT VERSION - CLIL MODULE PLANNING - PART 3

Teaching Unit 0: Work and team organization (2 hours)

Content Objectives:

- Introduction to the EducaLEAN methodology and team organization

Language Objectives:

- Specific vocabulary of the topic
- Present, past and future forms
- Modal verbs
- Comparative structure
- Hypothetical structure
- Making predictions with will
- Passive forms

Skills / study skills:

- Cause-effect relationships
- Making predictions
- Identification of characteristics
- Comparing different situations
- Predicting and reasoning on problems related to the topic
- Guessing and then explaining (why questions)

Subject specific assessment criteria:

- Problem-solving (the students are able to solve problems with accuracy, creativity and originality)
- Content knowledge (students show skills related to content and task)
- Development of concept (students show understanding of concepts regarding the content and when and where to apply this knowledge with cross-curricular connections)
- Quality of reflection (depth of reflection) and critical thinking
- Organization of their own and others' work
- Use of the language (the students are tested on their ability to use academic language and the technical vocabulary)
- Communication skills: students should be able to give accurate information about the work done and about the subject (share knowledge and ideas in peer tutoring, justify opinions, explain the steps taken to carry out a task)
- Individual behavior (students show their ability to work independently and with perseverance)
- Group behavior (students communication skills, willing to share ideas, and the ability of providing feedback to other students on the quality of their work), social interaction (work collaboratively in groups, constructive management of feelings and relationships)
- Creativity, initiative and attitude towards the subject that is being assessed
- Learning to learn ability and cultural and civic awareness
- Decision taking ability
- Self-assessment and goal setting

For the Self-Assessment grid, see the assessment grids section (below)

Step 1
Warming up and
motivation phase
(lead in)

Activities:

- **Brainstorming:** The students are asked questions that recall previous knowledge and are prompted to make predictions.

Some questions:

What is Git?

Have you ever heard anything about Git and the GitHub Platform?

- Presentation of a single slide about flipped classroom, CLIT (Content and Language Integrated Testing) and the assessment grid (provided below).

The teacher asks students some questions in order to recall previous knowledge and introduces:

- The list of new contents and activities
- what students will be able to do after the UD
- what language support will be needed for communication of content, thinking and learning
- which additional materials and resources will be provided to present the content and support any tasks

Work:

- The class will be divided in team of 3 members and all the work will be distributed.
- A PDF document about assessment items will be provided in order to understand what each team has to develop and how it will be assessed (see document “Test Items” on drive about many different types of assessment items such as
Quick-solution problems,
fill the table,
text matching,
completion,
mistakes finding,
open/close questions,
role taking,
role making,
role play,
consecution temporum,
serializing,
write down notes).
- Each team has to choose two/three different assessment items and provide a final assessment with and without solutions (grades included) about the sprint backlog content.
At the end of the sprint each student will take the final assessment provided by all the teams.
- Work organization inside each team.

TEACHER/STUDENT VERSION - CLIL MODULE PLANNING - PART 3

Teaching Unit 1: Why use Git (2 weeks)

Content Objectives:

- Investigate the definition of “Distributed Version Control System”
- Understand rules to collaborate on a project and have our own version of project files on our computer
- Comprehension of how recall specific versions of the project files at any given time
- Learn how to record changes to our file over time

Homework:

- A video about the introduction to SCRUM using the online platform and answer the question during the video watching.

https://www.youtube.com/watch?v=3RjQznt-8kE&list=PL4cUxeGkcC9goXbgTDQ0n_4TBzOO0ocPR&index=1

Teaching Unit 2: Installing Git (2 weeks)

Content Objectives:

- Learn how to install GIT
- Learn how to use ATOM text editor
- Understand how to config Git (user-name and user-email)
- Investigate basic command-line commands
- Understand how to open Atom
- Examples.

Homework:

- A video about the introduction to SCRUM using the online platform and answer the question during the video watching.

https://www.youtube.com/watch?v=MFtsLRphqDM&list=PL4cUxeGkcC9goXbgTDQ0n_4TBzOO0ocPR&index=2

Teaching Unit 3: How Git works (2 weeks)

Content Objectives:

- Understand how a Repository works (Repo's)
- Investigate how Git tracks changes in the Files of a Repository
- Understand what a Commit History is
- Investigate the meaning of “modified/staging/committed”
- Examples.

Homework:

- A video about the introduction to SCRUM using the online platform and answer the question during the video watching.

https://www.youtube.com/watch?v=iNP_KmOFqXs&list=PL4cUxeGkcC9goXbgTDQ0n_4TBzOO0ocPR&index=3

Teaching Unit 4: Creating a Repository (2 weeks)

Content Objectives:

- Investigate some practice example of Git and Atom usage
- Learn how to Create a Git repository
- Workshop

Homework:

- A video about the introduction to SCRUM using the online platform and answer the question during the video watching.

https://www.youtube.com/watch?v=v0Ch3yWQ-Zc&list=PL4cUxeGkcC9goXbgTDQ0n_4TBzOO0ocPR&index=4

Teaching Unit 5: Staging files (2 weeks)

Content Objectives:

- Understand how to stage a file
- Investigate some practice example of Git and Atom usage
- Workshop

Homework:

- A video about the introduction to SCRUM using the online platform and answer the question during the video watching.

https://www.youtube.com/watch?v=KngvG8WzYLU&index=5&list=PL4cUxeGkcC9goXbgTDQ0n_4TBzOO0ocPR

Teaching Unit 6: Making Commits (2 weeks)

Content Objectives:

- Learn how to make a commits
- Investigate some practice examples
- Workshop

Homework:

- A video about the introduction to SCRUM using the online platform and answer the question during the video watching.

https://www.youtube.com/watch?v=Fhgg2s_RmM&list=PL4cUxeGkcC9goXbgTDQ0n_4TBzOO0ocPR&index=6

Teaching Unit 7 Undoing Things (2 weeks)

Content Objectives:

- Understand undoing things
- Learn how to Checkout a commit
- Learn how to Revert a commit
- Learn how to Reset a commit
- Examples and workshop

Homework:

- A video about the introduction to SCRUM using the online platform and answer the question during the video watching.
https://www.youtube.com/watch?v=RIYrfkZjWmA&list=PL4cUxeGkcC9goXbgTDQ0n_4TBzOO0ocPR&index=7

Teaching Unit 8: Branches (2 weeks)

Content Objectives:

- Understand how to create more than one Branch
- Learn how to create a Master and some feature branches
- Investigate some examples and workshops

Homework:

- A video about the introduction to SCRUM using the online platform and answer the question during the video watching.
https://www.youtube.com/watch?v=QV0kVNvkMxc&index=8&list=PL4cUxeGkcC9goXbgTDQ0n_4TBzOO0ocPR

Teaching Unit 9: Merging Branches & conflicts (2 weeks)

Content Objectives:

- Understand how to merge branches into the master branch
- Learn how to handle conflicts
- Analyze a real situation
- Investigate some examples.

Homework:

- A video about the introduction to SCRUM using the online platform and answer the question during the video watching.
https://www.youtube.com/watch?v=XX-Kct0PfFc&index=9&list=PL4cUxeGkcC9goXbgTDQ0n_4TBzOO0ocPR

Teaching Unit 10: Introduction to GitHub (3 weeks)

Content Objectives:

- Understand what GitHub is
- Understand how to work with GitHub to collaborate from remote
- Analyze a real situation on the platform
- Investigating some practice examples.

Homework:

- A video about the introduction to SCRUM using the online platform and answer the question during the video watching.

https://www.youtube.com/watch?v=fQLK8Ib_SKk&index=10&list=PL4cUxeGkcC9goXbgTDQ0n_4TBzOO0ocPR

Teaching Unit 11: Collaborating on GitHub (2 weeks)

Content Objectives:

- Understand how to work in team with GitHub
- Analyze a real situation
- Investigate some practice examples.

Homework:

- A video about the introduction to SCRUM using the online platform and answer the question during the video watching.

https://www.youtube.com/watch?v=MnUd31TvBoU&index=11&list=PL4cUxeGkcC9goXbgTDQ0n_4TBzOO0ocPR

Teaching Unit 12: Forking (& Contributing) (2 weeks)

Content Objectives:

- Understand how to fork a repository
- Investigate how contributing
- Analyze a real situation
- Investigate some practice examples.

Homework:

- A video about the introduction to SCRUM using the online platform and answer the question during the video watching.

https://www.youtube.com/watch?v=HbSjyU2vf6Y&list=PL4cUxeGkcC9goXbgTDQ0n_4TBzOO0ocPR&index=12

Language Objectives:

- Specific vocabulary of the topic
- Present, past and future forms
- Modal verbs
- Comparative structure
- Hypothetical structure
- Making predictions with will
- Passive forms

Skills / study skills:

- Cause-effect relationships
- Making predictions
- Identification of characteristics
- Comparing different situations
- Predicting and reasoning on problems related to the topic
- Guessing and then explaining (why questions)

Subject specific assessment criteria:

- Problem-solving (the students are able to solve problems with accuracy, creativity and originality)
- Content knowledge (students show skills related to content and task)
- Development of concept (students show understanding of concepts regarding the content and when and where to apply this knowledge with cross-curricular connections)
- Quality of reflection (depth of reflection) and critical thinking
- Organization of their own and others' work
- Use of the language (the students are tested on their ability to use academic language and the technical vocabulary)
- Communication skills: students should be able to give accurate information about the work done and about the subject (share knowledge and ideas in peer tutoring, justify opinions, explain the steps taken to carry out a task)
- Individual behavior (students show their ability to work independently and with perseverance)
- Group behavior (students communication skills, willing to share ideas, and the ability of providing feedback to other students on the quality of their work), social interaction(work collaboratively in groups, constructive management of feelings and relationships)
- Creativity, initiative and attitude towards the subject that is being assessed
- Learning to learn ability and cultural and civic awareness
- Decision taking ability
- Self-assessment and goal setting

For the Self-Assessment grid, see the assessment grids section (below)

<p>Step 1 Warming up and motivation phase (lead in)</p>	<p>Class Activities:</p> <p>Short brainstorming: The students inside the team answer the three questions:</p> <ul style="list-style-type: none"> • What went wrong? • What can be improved? • What to do now? <p>The Scrum Muster asks the teams some questions in order to provide support and clarification about:</p> <ul style="list-style-type: none"> ○ The list of new contents and activities from backlog ○ What students will have to produce at the end of the UD ○ What language support will be needed for communication of content, thinking and learning, ○ Which additional materials and resources will be provided to present the content and support any tasks ○ The video contents <p>Homework:</p> <ul style="list-style-type: none"> • A video about the introduction to SCRUM using the online platform and answer the question during the video watching. <p>The students have to watch the video at home, alone or with the team classmates, and take notes about the specific language used, in order to ask clarifications during the class, and answer the teacher’s questions. Students are invited to take notes and write down key words or phrases.</p>
<p>Step 2 Introduction and Practice</p>	<p>Activities:</p> <ul style="list-style-type: none"> • Each team develop the test items related to the content previously studied at home <p>The teacher explains the concepts, interacts with the students during the team working to reinforce the content and language comprehension, encourage communication and questions (such as requests for clarification).</p>
<p>Step 3 Practice and consolidation</p>	<p>Activities:</p> <ul style="list-style-type: none"> • Each student check the assessment items provided by one other team-mates and the related assessment grid • The team deliver the test items with and without solutions to the teacher
<p>Step 4 Summing up Phase</p>	<p>Activity 1:</p> <ul style="list-style-type: none"> • The students are asked to solve all the tests provided by the classmates, working in team, and then discuss their outcomes.

Step 5
Testing Methods
of assessment
Self - assessment

Testing activities:

- Ongoing assessment

Each activity is monitored by the teacher for feedback on the learning process. Some activities are specifically meant as a form of self-assessment . The teacher observes the students while performing and evaluates the commitment of the students to the tasks and the correct execution of the same with memos in the register. Their performances in the oral presentation of the topic are evaluated according to the grid presented below.

Testing activity 2:

- Written test

For the final evaluation, all the students will have to do take the final test They will use the files (without solution) prepared by all the teams and posted on the platform.

The teacher will evaluate the students outcomes using the test files (with solutions) previously provided by the teams.

TEACHER GUIDE - MODULE SCHEDULE

Week	Sprint	LECTURER-STUDENT CONTACT				AUTONOMOUS WORK		TOTAL HOURS	OBSERVATION
		Lectures	Guided tasks	Subtot Hours	Duties	Hours			
1		1. Short presentation and brainstorming about the teaching plan (single slide overview in English) 3. Discussion about the GIT & GITHUB platform and backlog presentation	0.30 0.30			1		2	3
2	Each Sprint			7. Daily Scrum meeting 8. Test Items development (in classroom and at home) 3. Check and delivery 4. Solve the test items and team discussion 5. Self-assessment and final assessment	0.15 2 0.45 1 1	7	1. Homework: watching the video provided by the teacher about the Sprint subject 2. Test Items development and review	4 1	5
		Lectures (h)	1	LAB guided tasks for 12 sprints (h)		84	Homework time for 9 sprints (h)		45
				Total		85	Total		45
		Total hours							

Assessment Grids Section:

LANGUAGE – rubric for communicative language skills					
Accuracy	Consistent grammatical control and appropriate use of vocabulary.	Good grammatical control and generally appropriate use of specific subject vocabulary.	A few mistakes in grammar and specific vocabulary use do not lead to misunderstanding.	Systematically makes mistakes in grammar and specific vocabulary use but the message is generally clear.	The systematic grammar mistakes and the narrow range of specific vocabulary makes the message meaningless.
Fluency and Interaction	Can express him/herself with a natural flow and can interact with ease.	Can express him/herself and can interact with a good degree of fluency.	Can express him/herself and interact with a reasonable degree of fluency.	Can manage the discourse and the interaction with effort and must be helped.	The communication is totally dependent on repetition, rephrasing and repair.

A specific assessment grid for the specific subject content:

Assessment criteria	Grades for Scrum Methodology		
	2 – complete	1 – partial	0 – not at all
Defining the problem to solve and providing hypotheses or ideas Formulates a focused problem and provides reasonable hypotheses.	Formulates a focused problem but does not provide reasonable hypotheses/ideas.	Does not formulate a focused problem and does not provide reasonable hypotheses/ideas.	
Identification of factors that influence the project plan	Identifies the relevant factors and decides which are to be kept into consideration for the work plan.	Identifies only some secondary factors and has difficulties in deciding which are to be kept into consideration for the work plan.	Does not identify the factors for the work plan.
Making observations	Carries out procedures and strategies to develop the work plan requested by the project.	Carries out basic procedures to develop the simplest possible work plan.	Does not carry out basic procedures and has problem in developing any simple work plan.
Data collecting and processing	Collects data and performs activities as requested to test the knowledge.	Collects data and performs activities with mistakes and therefore cannot test the knowledge correctly.	Does not collect any data and perform any activities, therefore he is not able to troubleshoot mistakes.
Drawing assessment item and documentation	Draws a clear and meaningful logic assessment items and documentation.	Draws assessment items and documentation with inconsistency and not always well structured.	Does not draw assessment items correctly and is not able to document the work done.
Evaluating the procedure	Performs more complex tasks which may involve several steps.	Performs valid but elementary tasks.	Does not perform simple tasks.
Interpretation of the results	Provides full explanations of the used methodology and reasons about the performed team outcomes.	Makes valid but elementary explanations of team outcomes using a range of familiar concepts.	Does not make any explanations of the team outcomes.
Report the project	Writes the report in a correct way to interpret and draw conclusions autonomously.	Writes the report in a non completely correct way and is not able to interpret other's results.	Does not write report properly to express their/other's results.

A self-evaluation student grid Part 1:

Self-evaluation student grid				
CLASS				
STUDENT'S NAME				
L2:				
SUBJECT				
	General issues			
MY EVALUATION	1 lacking - 2 adequate - 3 good - 4 excellent			
a. Evaluation of the lesson as a whole				
b. Content acquisition				
c. Concepts development				
d. Involvement in communication				
f. Problem-solving activities				
e. Use of L2				
g. Individual behavior				
h. Behavior in the group				
DIFFICULTIES ENCOUNTERED				
WHAT INTERESTED ME MOST				

A self-evaluation student grid Part 2:

The strategies used and how often:	Always or very often	Often	Sometimes	Seldom/ never
a. I listened to the teacher's explanations.				
b. I answered the teacher's questions.				
c. I answered my classmates' questions.				
d. I used the examples presented by the teacher.				
e. I repeated verbally what I had previously heard, read or written.				
f. I tried to express orally, in my own words what I had heard, read or written.				
g. I used images, grids or graphs as a stimulus to speaking.				
h. Others:				

A self-evaluation student grid Part 3:

When I speak in a foreign language I consider:	Very important	Important	Partially important	Not important
a. The correct pronunciation of words				
b. The ability to improvise				
c. Knowledge of vocabulary				
d. Knowledge of the contents				
e. The use of facial expressions, gestures and body movements				
f. Grammatical correctness				
g. Clarity of exposition				
h. The ability of reformulating				
i. Check that the others understand me when I speak				
j. Others:				

A self-evaluation student grid Part 4:

The problems I had:	Always or very often	Often	Sometimes	Seldom/ never
a. I did not know the foreign language grammar.				
b. I did not possess a vocabulary in the foreign language.				
c. I did not know the contents				
d. I did not understand the teacher's questions.				
e. I was not interested in the non- linguistic subject.				
f. Others:				

A self-evaluation student grid Part 5:

The problems I had:	I can do this excellently, quite well, well, poorly.	Peer: You can do this.	Comments
a. Make good use of the information offered by the various media			
b. Jot down notes/ keywords efficiently, that can be used later			
c. Do some extensive brainstorming on the various texts and narrow these down to the essential strings in a mind map			
d. Produce a text / an outcome according to the task achievements of the assignment (cohesion, coherence, accuracy, fluency)			
e. Stick to the time schedule			
f. Express orally what I heard, read or wrote			
g. Make use of suggestions and feedback			
h. Make use of suggestions and feedback from my teacher			
i. Others:			

ASSESSMENT ITEMS – ASSESSMENT GRID

CONTENT

CRITERIA	4 EXCELLENT	3 GOOD/ ACCOMPLISHED	2 SATISFACTORY/ DEVELOPING	1 NOT SATISFACTORY/ BEGINNING
Use of topic-specific vocabulary in written work	All new words used appropriately in simple sentences	15 new words used appropriately in simple sentences	10 new words used appropriately in simple sentences	Fewer than 5 new words used appropriately in simple sentences
Identification of relevant information from different multimedia sources	Relevant information identified from at least three different multimedia sources	Relevant information identified from at least two different multimedia sources	Relevant information identified from at least one different multimedia sources	More than one website accessed but no relevant information identified

COOPERATION

Ability to cooperate in a group task	Student consistently performs well as a group member, showing initiative, organizing task completion and supporting all other group members	Student often performs well as a group member, showing initiative, organizing task completion and supporting all other group members	Student performs well as a group member at times, showing initiative, organizing task completion and supporting all other group members	Student acknowledges membership of the group but does little to help achieve group success
---	---	--	---	--

CREATIVITY

Originality in preparation and execution of test items and other visual materials	Student has at least three original design ideas and is able to prepare the resulting visuals	Student has at least two original design ideas and is able to prepare the resulting visuals	Student has at least one original design idea and is able to prepare the resulting visuals	Student makes some contribution to designing and preparing visuals
--	---	---	--	--

ASSESSMENT ITEMS QUALITY

Order of Items	Clear organization, easy to follow	Organization is poor and the development of presentation is obvious	Somehow organized but difficult to understand	Little thought given to organization
Pictures and graphics	Clearly visible and easy to understand	Visible with effort but easy to understand	Clearly visible but difficult to understand	Very difficult to decipher and understand
Items text	Text clear and easy to understand	Too small but content easy to understand	Clear text but content difficult to understand	Too small

Content of items	All topics were covered	Most topics were covered	Some topics were covered	Not all topics were covered
Handling of items	Smooth and timely transition	Hesitant changes between slides	Bad timing in slide shows	Clumsy manipulation throughout
ASSESSMENT ITEMS DELIVERY				
Items content relevant to test skill evaluation	Items content matched the skill evaluation.	Only a small amount of items content did not match the skill evaluation.	Only a few items matched the skill evaluation.	Items did not fit with the skill evaluation.
Language	Pronunciation and grammar excellent.	A few problems with accuracy of pronunciation and Grammar.	Some problems with accuracy of pronunciation and Grammar.	Many problems with accuracy of pronunciation and Grammar.
Use of bridging language	Well-chosen and varied bridging language used in all items.	Items provided and current correctly expressed.	Items provided but not always correctly expressed.	Items provided but without solutions.
Communicative skills	Team alignment orally well performed.	Oral team alignment performed with not always good outcomes.	Most of the oral team alignments do not match the expectations.	No oral team alignment performed.
Sharing of delivery between group members	Oral performances equally shared among the group members.	One member spoke considerably more than the others.	One member spoke most of the time.	Only one member spoke.
Following of delivery timetable	Properly accordance with the planned timetable.	Undertaken timetable not always respected.	Undertaken timetable frequently not respected.	No compliance with timelines.

Assessment frameworks

HOMEWORK EVALUATION FRAMEWORK					
Skill	Proficiency Levels	Insufficient	Sufficient	Good	Excellent
Problem identification	Communicate with the teacher and ask questions to get clarification or new information.				
	Understand the goals to be set to solve the problem.				
	Search for information by finding appropriate and relevant information from different sources.				
Integration and sharing	Use consciously and apply their knowledge by integrating them with new information.				
	Analyze and select specific aspects of the materials provided and share them with the class (or group).				
Organization of information	Reflect, use and communicate the information acquired for problem resolution, showing critical and analytical spirit.				
	Investigate problems using schemas and organizing them with models or patterns.				
Development of hypothesis and conclusive strategies	produce conclusive hypothesis using previous knowledge and showing logical/rational process, and also suggesting follow-up/monitor actions.				

CLASS-WORK EVALUATION FRAMEWORK

Skill	Proficiency Levels	Insufficient	Sufficient	Good	Excellent
Problem solving capability	Analyze and evaluate problematic situation focusing the possible solutions and alternatives.				
Effective thinking	Inductive, deductive and additive reasoning skill.				
Mind flexibility	Ability to analyze topics in order to build valid and efficient evaluation methods.				
Social skills	Ability to establish effective interactions of help and responsibility between two or more people, in order to cooperate and work together.				

PERFORMACES EVALUATION FRAMEWORK

Skill	Proficiency Levels	Insufficient	Sufficient	Good	Excellent
Use of instruments	Work in a precise and orderly way by choosing tools and materials suitable for the realization of the project.				
Use of time	Carry out different jobs on schedule or with a limited delay.				
Use of knowledge	Select useful information to understand the topic by including appropriate insights.				
Use of procedures	Use a wide variety of ways (verbal / graphic-symbolic, etc), in an organic and coherent way, in order to make the work well structured and comprehensible.				

TEAM WORKING EVALUATION FRAMEWORK

Skill	Proficiency Levels	Insufficient	Sufficient	Good	Excellent
Partecipation	Intervene during debites of the group consciously and continuously				
Observational skill	Noticing specificità and details useful for the further development and refinement of the work				
Organizational skill	Manage the actions of the team giving reasons for choices.				
Decision-making skill	Accurate decisions making drilling down situations				
Operational skill	Perform tasks in a detailed way				
Interdisciplinary connection skill	Connect to the other subjects with an effective way in order to implement cross-disciplinary projects				
Ability of supporting others	Encourage, motivate, lead and support the classmates.				
Ability of conflicts resolution	Manage aggressive attitudes about relationship among team members.				

FINAL ASSESSMENT

Work	Insufficient	Sufficient	Good	Excellent
Done at home				
Done at school				
Performance				
Team working				

OVERALL GRADE				
---------------	--	--	--	--