Assignment 1: Simple Game Project (SOLO)

Deadline (for 4 month course): **Week 4 - Monday**

Deadline (for 1 month summer course): **Week 2 - Monday**

Score: **20/100**

Gameplay:

- No camera movement, camera should be still.

- Simple gameplay & action

Required code:

- OnTriggerEnter and/or OnTriggerExit

- Update and/or FixedUpdate

- Moving the position of an object (using Character Controller Move or by setting transform.position)

- Rotating an Object

- Spawning an Object and/or Destroying an Object

- using GetComponent to access a component

Required Unity features:

- Materials

- Lighting

- Rigidbody and/or CharacterController (not on same object!)

- Canvas UI displaying Text or TextMeshPro on Screen

- Sounds and/or Music

Optional:

- Textures

- Anything you want to add, be creative. :)

Assignment 2: Platformer Game Project (SOLO)

Deadline (for 4 month course): **Week 8 - Monday**

Deadline (for 1 month summer course): **Week 3 - Monday**

Score: **20/100**

Gameplay:

- Camera moves: Side scrolling Camera OR Third Person Camera OR ... (as long as the camera moves)

- Player can Move (2D 'horizontal' or 3D 'horizontal and vertical' movement)

- Player can Jump

- 1 Full Level (>= 5 minutes gameplay)

Required Features:

- Collectible Objects (e.g. Coins)

- Checkpoint system (Loading & Saving)

- Player Death & Player Respawn using Checkpoint System

- Can be played using Controller **AND** Mouse & Keyboard

- Singleton Software Design Pattern (e.g. GameManager)

Required Unity features:

- Materials and Textures

- Lighting

- Rigidbody and/or CharacterController (not on same object!)

- Canvas UI displaying Text and/or Images on Screen

- Sounds effects and/or Music

- Animations & Animation Blending (using BlendTree)

Optional:

- NavMesh & NavMesh Agent

- RayCasting & anything you want to add, be creative. :)

Assignment 3: Action Game Project (SOLO)

Deadline (for 4 month course): **Week 12 - Monday**

Deadline (for 1 month summer course): **Week 4 - Monday**

Score: **20/100**

Gameplay:

- No Camera requirements

- No Player requirements

- Action game (can be any kind of game that has any player action: shooter, RPG, hack & slash, ...)

Required Features:

- Main Menu UI with at least Start and Quit functionality & Scene Loading

- Game is fully localized using XML (English and Chinese)

- Can be played using Controller AND Mouse & Keyboard

Required Unity features:

- Advanced animations: Avatar Masking using multiple animation layers and / or IK

- Animations & Animation Blending (using BlendTree)

- AI using Pathfinding (NavMesh and NavMeshAgent)

- Materials, Textures & Lighting

- Rigidbody and/or CharacterController (not on same object!)

- Canvas UI displaying Text and/or Images on Screen

- Sounds effects and/or Music

Optional:

- RayCasting & Collectible Objects (e.g. Coins)

- CheckPoint system (Loading & Saving) & Player Death / Player Respawn using CheckPoint System

- Local Multiplayer

- Singleton Software Design Pattern (e.g. GameManager)

- Anything you want to add, be creative. :)

Final Game Project (Group)

Deadline (for 4 month course): **Week 16 - Monday**

Deadline (for 1 month summer course): **Week 5 - Monday**

Score: **40/100**

Gameplay:

- No Camera requirements (e.g. Static, Third Person, First Person, Top Down, Side scrolling, ...)

- No Player requirements

Required Features:

- Main Menu UI with at least Start and Quit functionality & Ingame Menu UI to Quit to Main Menu

- Controls Menu (Just to view controls, changing controls not required, a picture of controls is fine for both Keyboard Mouse and Controller)

- Ingame HUD (e.g. Health, Ammo, Coins, ...)

- Scene Loading

- Game is fully localized using XML (English and Chinese)

- Can be played using Controller **AND** Mouse & Keyboard

- IF it's a singleplayer or co-op *:

* Loading and Saving using CheckPoint system + Continue from Main Menu using PlayerPrefs

* Player Death & Player Respawn using CheckPoint System

Required Unity features:

- Advanced animations: Avatar Masking using multiple animation layers and / or IK

- Animations & Animation Blending (using BlendTree)

- AI using Pathfinding (NavMesh and NavMeshAgent)

- Materials and Textures & Lighting

- Rigidbody and/or CharacterController (not on same object!)

- Canvas UI displaying Text and/or Images on Screen

- Sounds effects and/or Music

Optional:

- RayCasting

- Collectible Objects (e.g. Coins)

- Local Multiplayer

- Singleton Software Design Pattern (e.g. GameManager)

- Custom Shader(s)

- PostProcessing Effects

- Local Multiplayer

- Multiplayer Networking using UNet

- Anything you want to add, be creative. :)