400+ Year Tradition of Excellence in Teaching and Research:
   #1 University in Ireland
   #61 University in the World*

Successful Digital Entertainment Technology Spin-outs, TCD:

* For source of ranking stats and more details see: https://www.tcd.ie/research/about/rankings/
Where Past Graduates Have Gone

Games Industry Incl. Indie Startup Companies
- Gameloft
- Lionhead Studios
- PopCap
- Ezio
- SnoozBot
- Zen
- SnowGlobe Games
- hb studios
- Magic Nation
- EA
- Splash Damage
- PlayFirst
- Havok
- Bluebear
- BioWare
- DemonWare

Animation / VFX / Visualization
- Framestore
- vStream
- RTI
- MPC
- burrows

Wider Computing & IT Industry
- RISK ADVISORY
- First Derivatives plc
- Cisco
- IBM
- Mobanode
- Zarion
- HP
- MasterCard
- Atos
- 125 Systems
- Guidewire
- Accenture
- Version
- ARM
- THENOW FACTORY
- Microsoft
- University of Cambridge

Research and Development
- ATR

The use of logos here does not imply an official endorsement of the course by the owners.
Course Structure

Semester 1 (Sep-Dec)
- Software Engineering for Distributed Systems
- Individual Project
- Numerical Methods
- Graphics and Console Hardware
- Autonomous Agents
- Real-time Animation
- Vision Systems
- Datacomms and Wireless Networking
- IET Seminar Series
- Team Project
- Advanced Mathematical Modelling
- Real-time Rendering
- Game AI
- Real-time Physics
- Augmented Reality
- Datacomms and Wireless Networking Practical

Semester 2 (Jan-Apr)
- Dissertation

Full year: Sep – Aug
(full time from April)

Options Modules (choose 6 of 10; 3 in each semester)
Learning Resources

**HARDWARE:**
The IET dedicated GameLab is a 24/7 accessible computing lab which includes

- Individual Xbox 360’s consoles per student
- Individual Dell Precision Workstations with state-of-the-art Multi-core Intel Xeon Processors
- Miscellaneous Gaming h/w, including Augmented Reality displays, Game Consoles, Mobile devices, Microsoft Kinect and other game controllers, Cameras and Projection Equipment, etc.

**LIBRARY AND SOFTWARE:**

- MSDN Academic Alliance software library
- Apple Developer University Program
- TCD library access to all books published in UK & Ireland
- In-lab copies of leading game development publications
- Electronic access to leading scientific publications
- 3D Modelling, Image & Video Editing Tools

Microsoft DreamSpark

iOS Developer
Examples of Coursework

1. Fresnel Effect for **Real-time Rendering** by Rashid Bhamjee 2011
   [http://www.youtube.com/watch?v=d0ZBMl4hhpw](http://www.youtube.com/watch?v=d0ZBMl4hhpw)

2. 3D Pokemon AR Trading Card Game for **Augmented Reality** by Amy Davidson 2011
   [http://www.youtube.com/watch?v=JSiQ4O6nl4k](http://www.youtube.com/watch?v=JSiQ4O6nl4k)

3. AR Arkanoid for **Augmented Reality** by Gianluca Vattino 2010
   [https://www.youtube.com/watch?v=rvC6O1M1ojo](https://www.youtube.com/watch?v=rvC6O1M1ojo)

4. Real-time Approximations of Sub-surface scattering for **Real-time Rendering** by Rowan Hughes 2011
   [https://www.youtube.com/watch?v=Q85F2eGbDao](https://www.youtube.com/watch?v=Q85F2eGbDao)

5. Rigid Body Physics Engine for **Real-time Physics** by Carlos Ramalhao 2010
   [http://www.youtube.com/watch?v=QHSJYzRXM](http://www.youtube.com/watch?v=QHSJYzRXM)

6. Dynamic Character Motion Control for **Real-time Animation & Real-time Physics** by Bogdan Bucur 2009
   [http://www.youtube.com/watch?v=wtV3GNRWqFA](http://www.youtube.com/watch?v=wtV3GNRWqFA)
Team Project

Each year students teams develop a prototype game or interactive application with industry feedback.
The MSc Dissertation is a 750+ man hour individual project expected to deliver results of publishable standard. The following are just a few examples of past student work:

“Real-time Rendering of Animated Volumetric Data” by Luis Valverde 2010
[Link](http://www.youtube.com/watch?v=betTuSmIFkQ)

“Gestural Interface with a Projected Display Game” by Gianluca Vatinno 2010
[Link](http://www.youtube.com/watch?v=5Ekys8HWSoU)

“Painterly Stylization of Real-time Volume Rendering” by Carlos Ramalhao 2010
[Link](http://www.youtube.com/watch?v=ifXuUBsIEl0)

“Real-time Rendering of Translucency in Skin” by David Whelan 2009
[Link](http://www.youtube.com/watch?v=stWjd4rJP0)
CONTACT DETAILS
Website: http://www.scss.tcd.ie/postgraduate/msciet/
Email Queries: postgraduate@scss.tcd.ie
Telephone: +353 1 896 3094  Fax: +353 1 677 2204

School of Computer Science and Statistics: http://www.scss.tcd.ie
Trinity College Dublin: http://www.tcd.ie

IMPORTANT DATES
Application Deadline: 30th June, 2014
Course Duration: Sep.2014 – Aug. 2015

ADMISSION REQUIREMENTS (In brief)
• Upper second class honours or equivalent in a computer science or related bachelors degree.
• Previous experience in programming, software engineering, mathematics and 3D graphics.
• Strong motivation to pursue a career in Interactive Entertainment Technology.
• If English is not your 1st language: IELTS 6.5+ or equivalent

The course is part-funded by the Irish Government under the National Development Plan Graduate Skills Conversion Program.