



SREE NARAYANA COLLEGE KOLLAM

**CERTIFICATE COURSE ON TINKERCAD
CONDUCTED BY DEPARTMENT OF PHYSICS**

Tinkercad Circuits is a popular digital and analog electronics simulator for hobbyists, students, and makers. Tinkercad Circuits offers an intuitive interface that lets users drag and drop components into their virtual electronic design. Besides creating Arduino-based designs, it's also possible to simulate other analog and digital circuits that don't use a microcontroller (MCU) or development board.

Starts on 10/10/2017

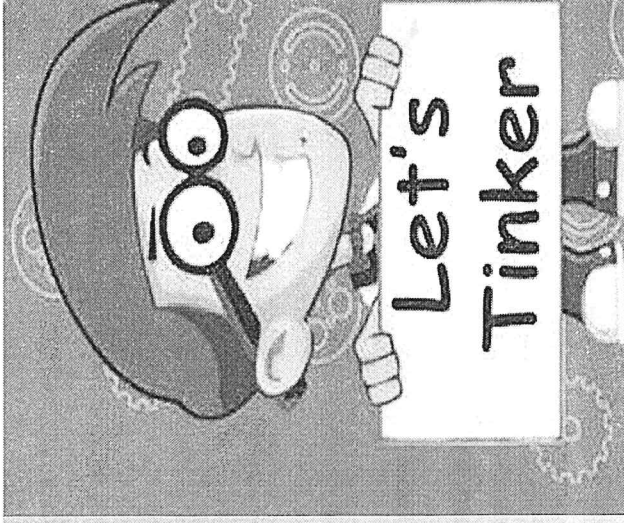
Ends on 10/12/2017

Available Seats: 25

Admission starts on 01/10/2017.

For more information, contact ASITHA L.R (Coordinator)

Ph. No: 9995213881



Dept. of Physics
Sree Narayana College
Kollam 681 001

DEPARTMENT OF PHYSICS

CERTIFICATE COURSE- TINKERCAD

SYLLABUS- 30 Hrs

Module 1: Learning Basic Circuits (5 Hrs)

Focus on fundamentals, such as breadboard wiring, Ohm's law, and series and parallel circuits.

Module 2: Exploring Circuits (7 Hrs)

Introduce electronics (LEDs, batteries, hobby motors, resistors, and switches), Basic circuit connections: Controlling LEDs and DC motors, Understand the switches, pushbuttons, and battery connections.

Module 3: Arduino in Tinkercad (7 Hrs)

Introduction to Arduino and Robotics, Control multiple motors with Arduino using scratch programming, Connect the IR sensor and photo-resistor to make an obstacle avoider robot, Use the Ultrasonic sensor to make a robot and home security system, Use servo motors to make robotics Arms.

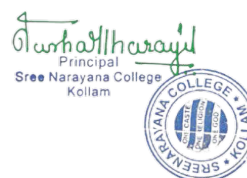
Module 4: Teaching Circuits with Tinkercad (6 Hrs)

Simple project discussion using the integration of multiple sensors.

Module 5: PROJECTS (5 Hrs)

1. Arduino--Getting-started-with-Tinkercad-Simulation: how to build circuits, code
2. TinkerCad-Traffic-Light-Simulation: create own traffic light system.
3. Using Loops in programming the Arduino using Tinkercad: learn how to use for Loops
4. TinkerCad-Knight-Rider-Simulation: create iconic strobe effect with sound
5. TinkerCad-Parking-Sensor-Simulation with flashing LEDs and sounds and distance sensor
6. Tinkercad Night Light Simulation with LDR and push switch.
7. Tinkercad Electronic Dice with Push button
8. Tinkercad Creating and displaying characters using an LCD

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SREE NARAYANA COLLEGE, KOLLAM

DEPARTMENT OF PHYSICS

Certificate Courses

Members of the Board Studies

The following faculties are selected as Members of Board of studies for Certificate course TINKERCAD Conducted by Department of Physics, Sree Narayana College, Kollam in the academic year 2017-18.

	Name	Designation
1	Dr. Anirudhan	Principal, Associate Professor, Department of Botany, Sree Narayana College, Kollam.
2	Dr. G. Sajeevkumar	Associate Professor, Department of Physics, Sree Narayana College, Kollam
3	Sri. Srijith S	Assistant Professor, Department of Physics, Sree Narayana College, Kollam
4	Smt. Asitha L.R	Assistant Professor, Department of Physics, Sree Narayana College, Kollam
5	Sri. Baiju V	Assistant Professor, Department of Physics, Sree Narayana College, Kollam
6	Dr. Dedhila Devadathan	Assistant Professor, Department of Physics, Sree Narayana College, Kollam
7	Dr. Sankar S	Assistant Professor, Department of Physics, Sree Narayana College, Kollam
8	Dr. Roxy M S	Assistant Professor, Department of Physics, Sree Narayana College, Kollam
9	Dr. Vidya S	Assistant Professor, Department of Physics, Sree Narayana College, Kollam
10	Smt. Rehna R	Assistant Professor, Department of Physics, Sree Narayana College, Kollam



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SREE NARAYANA COLLEGE, KOLLAM

DEPARTMENT OF PHYSICS

Minutes of the Meeting

The minutes of the meeting of the BoS of Certificate courses was held on 25th July, 2017 in the Department of Physics, Sree Narayana College, Kollam at 10.00 a.m. The following members were present for the meeting.

- 1 Dr. Anirudhan
- 2 Dr. Sankar S
- 3 Smt. Asitha L R
- 4 Sri. Srijith S
- 5 Sri. Baiju V
- 6 Dr. Roxy M S
- 7 Dr. Dedhila Devadathan
- 8 Dr. Vidya S
- 9 Smt. Rehna R
- 10 Dr. Sajeev Kumar G
- 11 Sri. Vipin Kumar C

The following points were discussed in the meeting.

- The BoS has decided to initiate the following courses in the academic year 2017-18.
 1. **TINKERCAD (TC)**
- The syllabus for the above courses was designed by the committee by considering the global needs and demand of the market.
- It was decided to conduct the above courses for more than 30 hours.
- The committee has framed the time- table apart from the academic hours.
- The Classes will start on September 10 2017 and ends on Dec 10 2017.
- While running the course there are some expenditures such remuneration for the trainers, stationery and miscellaneous. Therefore, the minimum affordable fees should be charged.

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- The committee has suggested to appoint the trainers for the above courses.
- The minimum attendance for the successful completion of the course is decided to be 75%.
- The minimum marks required for the qualification is decided to be 50 marks for Theory and 25 marks for Practicals.
- The submission of the assignment is compulsory for the successful completion of the course.
- The board has decided to initiate the certificate courses as per the demand of the stakeholders and approval of I.Q.A.C.

Smt. Asitha L.R proposed vote of thanks and the meeting was ended.



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DEPARTMENT OF PHYSICS

The following faculties are selected as trainers for Certificate course TINKER CAD Conducted by Department of Physics, Sree Narayana College, Kollam in the academic year 2017-18.

List of Teachers - TINKERCAD				
	Name	College	Mobile no:	mail id
1	Smt Rehna R	SNCK	8281328303	rehnaraju@gmail.com
2	Sri. Srijith S	SNCK	9633500425	srijithkeanu@gmail.com
3	Smt.Asitha L.R	SNCK	9995213881	asitha85@gmail.com
4	Sri. Baiju V	SNCK	8281856366	baijuvkollam@gmail.com



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CERTIFICATE COURSE TIME TABLE

Name: TINKERCAD (TC)

Duration: 30 Hrs

Start Date: SEP 10 2017

End Date: DEC 10 2017

DAY /08:15 PM TO 09:15 AM	HANDLED BY
MONDAY	BAIJU V
TUESDAY	ASITHA L R
WEDNESDAY	SRIJITH S
THURSDAY	PRACTICAL HOURS (REHNA V/ BAIJU V)
FRIDAY	SRIJITH S



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**SREE NARAYANA COLLEGE ,KOLLAM
DEPARTMENT OF PHYSICS**

CERTIFICATE COURSE

Name : **TINKERCAD**

Duration : 30 Hrs

Start Date: **SEP 10 2017**

END DATE:

DEC 10 2017

LIST OF STUDENTS

Sl. No.	Name of the student	Gender	Class	Mobile No:	Year of Admission
1	AMBIKA PRASAD	F	MSC Physics	9447064602	2017
2	AMINSHAH S U	F	MSC Physics	9446900213	2017
3	AMRITHA L	F	MSC Physics	9633500425	2017
4	ANANDU P RAJU	M	MSC Physics	9995213881	2017
5	ANANTHU A	M	MSC Physics	8281856366	2017
6	ANJU B M	F	MSC Physics	9446454083	2017
7	ANUPAMA S	F	MSC Physics	9496260308	2017
8	ANZIA A	F	MSC Physics	9495243029	2017
9	APARNA G	F	MSC Physics	9745464525	2017
10	ARYA C R	F	MSC Physics	8281328303	2017
11	ASWATHY VARMA V	F	MSC Physics	9995154591	2017
12	ATHIRA VL	F	MSC Physics	9746400006	2017
13	GOPIKRISHNA M	M	MSC Physics	9446908450	2017
14	HARSHA P	F	MSC Physics	7034835244	2017
15	IVAN JOSE	M	MSC Physics	9946635799	2017
16	MEGHNA BABU	F	MSC Physics	9446556866	2017
17	RAKHI CHANDRAN S	F	MSC Physics	9447029436	2017
18	RANI KRISHNAN M	F	MSC Physics	8921473656	2017
19	SREELEKSHMI S	F	MSC Physics	9567609653	2017
20	VENI C S	F	MSC Physics	9446258067	2017

(Handwritten signatures for each student row)
 Dhari
 Amalose
 Amritha
 P Raju
 Ananthu
 Anju
 Anupama
 Anzia
 Aparna
 Arya
 Aswathy
 Athira
 Gopi
 Harsha
 Ivan
 Meghna
 Rakhi
 Rani
 Sree
 Veni

(Handwritten signature)

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DEPARTMENT OF PHYSICS

CERTIFICATE COURSE

Name : TINKERCAD (TC)

Duration : 30 Hrs

Start Date: DEC 10 2018

End Date: DEC 10 2017

ATTENDENCE STATEMENT

Sl No	Name of the Student	Register No:	% of Attendance
1	VENI C S	TC01	88
2	SREELEKSHMI S	TC02	90
3	RANI KRISHNAN M	TC03	92
4	RAKHI CHANDRAN S	TC04	91
5	MEGHNA BABU	TC05	92
6	IVAN JOSE	TC06	91
7	HARSHA P	TC07	90
8	GOPIKRISHNA M	TC08	80
9	ATHIRA V L	TC09	89
10	ASWATHY VARMA V	TC10	88
11	ARYA C R	TC11	80
12	APARNA G	TC12	89
13	ANZIA A	TC13	80
14	ANUPAMA S	TC14	87
15	ANJU B M	TC15	88
16	ANANTHU A	TC16	89
17	ANANDU P RAJU	TC17	90
18	AMRITHA L	TC18	89
19	AMINSHAH S U	TC19	88
20	AMBIKA PRASAD	TC20	90

[Handwritten signatures and names next to attendance values: Veni, Sreelekhmi, Rani, Rakhi, Meghna, Ivan, Harsha, Gopi, Athira, Aswathy, Arya, Aparna, Anzia, Anupama, Anju, Ananthu, Anandu, Amritha, Aminshah, Ambika]

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[Stamp: Dept of Physics, Sri Narayana College, Kollam - 691 022]

SREE NARAYANA COLLEGE KOLLAM

CERTIFICATE COURSE 2017-18

Department: PHYSICS
 Name of Certificate course: TINKERCAD
 No. of students enrolled: 20
 No. of students passed: 20

Sl No.	Candidate Code	Name of Candidate	Department	Completed or not
1	63017132001	AMBIKA PRASAD	PHYSICS	YES
2	63017132002	AMINSHAH S U	PHYSICS	YES
3	63017132003	AMRITHA L	PHYSICS	YES
4	63017132004	ANANDU P RAJU	PHYSICS	YES
5	63017132005	ANANTHU A	PHYSICS	YES
6	63017132006	ANJU B M	PHYSICS	YES
7	63017132007	ANUPAMA S	PHYSICS	YES
8	63017132008	ANZIA A	PHYSICS	YES
9	63017132009	APARNA G	PHYSICS	YES
10	63017132010	ARYA C R	PHYSICS	YES
11	63017132011	ASWATHY VARMA V	PHYSICS	YES
12	63017132012	ATHIRA V L	PHYSICS	YES
13	63017132013	GOPIKRISHNA M	PHYSICS	YES
14	63017132014	HARSHA P	PHYSICS	YES
15	63017132015	IVAN JOSE	PHYSICS	YES
16	63017132016	MEGHNA BABU	PHYSICS	YES
17	63017132017	RAKHI CHANDRAN S	PHYSICS	YES
18	63017132018	RANI KRISHNAN M	PHYSICS	YES
19	63017132019	SREELEKSHMI S	PHYSICS	YES
20	63017132020	VENI C S	PHYSICS	YES

[Handwritten Signature]

Dept. of Physics
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REPORT ON CERTIFICATE COURSE IN MICROPROCESSOR AND MICROCONTROLLER AND PYTHON PROGRAMMING

DEPARTMENT OF PHYSICS

ACADEMIC YEAR 2017-18

Tinkercad circuits is a fully functional Arduino+ Circuit simulator that runs in a web browser Tinkercad provides a "breadboard view" with graphics that look like the physical circuit parts you would use in real life, which is a much more beginner-friendly approach. The ability to simulate an Arduino and run code directly in the web browser is an added bonus. While simulations are never a complete replacement for real hardware, they're certainly better than nothing if students don't have any other options.

The BoS has decided to initiate the following courses in the academic year 2017-18.

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Duration: 05 hrs Project and 25 hrs theory

The students have completed 30 sessions including theory and project during the period September 2017- December 2017.

Total Students Successfully Completed: 20



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