What is Engineering?

1
00:00:05,920 --> 00:00:11,820
Charlie Blackwell-Thompson, Exploration Ground Systems Launch Director: I would say engineering

2
00:00:11,830 --> 00:00:12,830
is a whole lot of different things.

3
00:00:12,830 --> 00:00:16,199
And the great thing about an engineering degree is that it can take many different forms in

4
00:00:16,200 --> 00:00:16,700
your career.

5
00:00:16,700 --> 00:00:19,920
Engineering is designing and developing flight hardware.

6
00:00:19,940 --> 00:00:22,360
It’s designing and developing ground systems.

7
00:00:22,380 --> 00:00:24,760
It’s putting flight hardware together.

8
00:00:24,760 --> 00:00:26,080
It’s testing it.

9
00:00:26,080 --> 00:00:27,660
It’s launching it.

10
00:00:27,720 --> 00:00:31,140
So an engineering degree can take you many different places and expose you to a lot of

11
00:00:31,160 --> 00:00:33,840
different things in your career.

12
00:00:34,520 --> 00:00:36,380

Glen Chinn, Deputy Project Manager for Orion Production Operations: So, engineering to

13
00:00:36,380 --> 00:00:44,320
me, is taking the sciences, technology, and turning that into practical, everyday use

14
00:00:44,600 --> 00:00:46,540
to improve your life.

15
00:00:47,580 --> 00:00:51,360
Melissa Jones, NASA Landing and Recovery Director: Engineering, to me, is identifying a problem

16
00:00:51,360 --> 00:00:53,460
and working towards a solution.

17
00:00:55,360 --> 00:01:00,600
Weiping Yu, Aerospace Technologist and Physicist: To me, engineering is application of scientific

18
00:01:00,600 --> 00:01:04,360
knowledge to solve real-world problems.

19
00:01:07,320 --> 00:01:09,800
Claudia Eyzaguirre, Technical Integrator for the Mobile Launcher: So when I think of engineering,

20
00:01:09,810 --> 00:01:11,300
I go to the root of the word.

21
00:01:11,300 --> 00:01:16,460
Engineering is made up of two Latin words, which means “devise” and “cleverness.”

22
00:01:16,460 --> 00:01:18,600
And that’s basically what it is.

23
00:01:18,600 --> 00:01:23,130

Engineering is the tools that you learn in
school, like math and science, and you use

24
00:01:23,130 --> 00:01:27,640
your cleverness to be able to solve problems.

25
00:01:29,520 --> 00:01:33,580
Jose Perez Morales, Element Project Manager:
Engineering, to me, is probably the science

26
00:01:33,580 --> 00:01:38,280
– it's basically the science of solving
problems.

27
00:01:38,520 --> 00:01:47,780
It's the science of creating, the science
of building, the science of taking challenges

28
00:01:47,800 --> 00:01:56,580
that other people basically dream to take,
and creating things for the future.

29
00:01:56,580 --> 00:02:06,420
And leaving a mark, if we want to say that,
for the future generations.

30
00:02:07,300 --> 00:02:10,480
Yves Lamothe, Program Integration Management
Team Lead: Engineering, to me, is problem-solving.

31
00:02:10,640 --> 00:02:13,420
We engineer our way out of everything in life.

32
00:02:13,420 --> 00:02:19,190
And I don't want to say our way, but anytime
we have an issue – for example, we need

33
00:02:19,190 --> 00:02:24,360
to build homes for people to live in, we need
to figure out a way to get to another planet,

34
00:02:24,360 --> 00:02:31,970
if we need to build a submarine that can take
us miles and miles under the ocean floor – we

35
00:02:31,970 --> 00:02:35,400
engineer things to help us solve those problems.

36
00:02:37,340 --> 00:02:41,920
Crystal Jolly, Systems Engineer: Engineering,
to me, is not what we do, but how we see the

37
00:02:41,930 --> 00:02:42,930
world.

38
00:02:42,930 --> 00:02:47,380
We take something from nothing and create
a whole world with it.

39
00:02:47,480 --> 00:02:51,260
We have created transportation, and aircraft,
and rockets.

40
00:02:51,260 --> 00:02:56,459
We've made buildings safer, we've made
roadways safer, we've made bridges safer.

41
00:02:56,459 --> 00:03:01,410
We've created weather satellites that predict
hurricanes and tornadoes.

42
00:03:01,410 --> 00:03:06,080
We've created safety measures for other
people living in the world.

43
00:03:06,080 --> 00:03:09,540
Everybody has been positively affected by
engineering.

44

00:03:09,540 --> 00:03:16,640
I think that, for me, what engineering really
is, is you take an idea and you turn it into

45
00:03:16,680 --> 00:03:17,580
a reality.

46
00:03:17,620 --> 00:03:20,660
That's what engineers do every single day.

47
00:03:22,500 --> 00:03:24,220
I'm Yves Lamothe.

48
00:03:24,220 --> 00:03:29,900
I'm the program integration and management
team lead within the systems engineering and

49
00:03:29,900 --> 00:03:33,040
integration division for exploration ground
systems.

50
00:03:39,880 --> 00:03:34,260
I am an engineer.

51
00:03:41,080 --> 00:03:48,240
My name is Glen Chinn, I'm a supervisor,
I'm a deputy project manager for Orion production

52
00:03:48,240 --> 00:03:50,900
operations, and I am an engineer.

53
00:03:51,610 --> 00:03:55,300
My name is Claudia Eyzaguirre, I'm a technical
integrator for the mobile launcher, and I

54
00:03:55,300 --> 00:03:56,600
am an engineer.

55
00:03:57,140 --> 00:04:04,280

My name is Weiping Yu, people call me Dr. Yu, and I'm an aerospace technologist and

56
00:04:04,440 --> 00:04:05,720
physicist.

57
00:04:06,740 --> 00:04:12,120
My name is Crystal Jolly, I'm a systems engineer with the EGS program here at Kennedy

58
00:04:12,120 --> 00:04:14,000
Space Center, and I am an engineer.

59
00:04:14,000 --> 00:04:24,600
My name is Jose Perez Morales, my title is I'm the element project manager for the

60
00:04:24,680 --> 00:04:28,440
Exploration Ground Systems here at KSC.

61
00:04:28,660 --> 00:04:30,740
I am an engineer.

62
00:04:31,180 --> 00:04:36,500
I'm Charlie Blackwell-Thompson, the Exploration Ground Systems launch director, and I am an

63
00:04:36,500 --> 00:04:37,500
engineer.