2019–2020
UNDERGRADUATE
Academic Calendar and Academic Information

SANTA CLARA UNIVERSITY

STUDENT RESPONSIBILITY

Students are personally responsible for knowing all academic and administrative policies and regulations affecting their program of study and for abiding by all such policies and regulations during their period of enrollment at the University. Continued enrollment is subject to compliance with the academic and administrative policies and regulations as described in the Undergraduate Bulletin and otherwise published by the University. Failure to understand the policies and regulations does not relieve a student of his or her responsibility for adhering to the policies and regulations.

COMMUNICATION POLICY

The University will communicate with undergraduate students through a variety of formats. Information that is sent to undergraduate students from the University via their campus mail box, local address, or their Santa Clara email address is considered official communication and should be treated as such. Students are asked to check their campus mailbox and their Santa Clara email account on a daily basis, and are responsible for reading and responding to the information they receive from the University. Although the University urges undergraduate students to use their Santa Clara email address as their primary email, students who will not be checking that address regularly should forward their email to their preferred email account.

ACADEMIC ADVISING

During the mandatory advising period each spring, continuing students will schedule an advising appointment with their assigned advisor. The purpose is to plan a tentative class schedule for the following year and discuss academic requirements, majors, career options, and other topics related to their program of study. Students are encouraged to meet with their advisor prior to registration each quarter to review their academic progress and class schedule for the following quarter. Students are required to run their degree audit and bring it with them when they meet with their advisor.

The *Core Curriculum Handbook*, provided to new students, serves as a handy reference that summarizes curriculum requirements for all colleges and majors. *www.scu.edu/provost/ugst/core/core-curriculum-guide/*

The *University Undergraduate Bulletin* is the official statement of academic requirements. This important reference includes a complete description of all University programs and courses, academic information and policies, financial and tuition information, a listing of faculty and other descriptive information about University activities and facilities. Follow the academic requirements published in the bulletin for the year the student began as a freshman. If the student entered as a transfer, see the head of advising for their college to determine which bulletin to follow. *www.scu.edu/academics/course-catalogs/undergraduate-bulletin/*

MAJORS AND MINORS

Students should declare their primary academic major by the end of the sophomore year. Students may declare a major at the time of initial matriculation, except in the Leavey School of Business, where declaration of a major is normally made no sooner than the end of sophomore year. Students who initially matriculate without a declared major must obtain the approval of the department chair of the intended major and submit a Program Petition Form to the Enrollment Services Center/OneStop, First Floor, Patricia A. and Stephen C. Schott Admission & Enrollment Building. Students participating in study abroad or domestic public sector study programs must declare a major before participating in the program. Students who do not declare a primary major after achieving junior status (completion of 88 quarter units) will have a registration hold placed on their record. This hold will only be removed once the student has declared a primary major.

Students may declare a second academic major in addition to their primary major, except for students in the Leavey School of Business, who may declare only one major in that school. Students who want to declare a second major must obtain the approval of the department chair of the intended major and submit a Program Petition Form to the Enrollment Services Center/OneStop, First Floor, Patricia A. and Stephen C. Schott Admission & Enrollment Building. To be awarded a second major, a student must complete all requirements of the University Core Curriculum, college or school, and departmental requirements for that major. Requirements for a second major are as binding as those of a primary major and must be completed before a degree will be awarded. If a student decides to drop a second major, he or she must submit a Program Petition Form to the Enrollment Services Center/OneStop, First Floor, Patricia A. and Stephen C. Schott Admission & Enrollment Building.

Students may declare an academic minor from amongst the departmental minors offered through the college or schools, the general minors in business and engineering, or one of the interdisciplinary minors offered by the University. Students who want to declare an academic minor must obtain the approval of the department chair or program director of the intended minor and submit a Program Petition Form to the Enrollment Services Center/OneStop, First Floor, Patricia A. and Stephen C. Schott Admission & Enrollment Building. To be awarded a minor, a student must complete all requirements of the minor as prescribed. Requirements for a minor are binding and must be completed before a degree will be awarded. If a student decides to drop a minor, he or she must submit a Program Petition Form to the Enrollment Services Center/OneStop, First Floor, Patricia A. and Stephen C. Schott Admission & Enrollment Building.

CHANGE OF ACADEMIC MAJOR

A change of major within the same school or college requires the approval of the relevant department chair or program director. Students wishing to change their academic major within a school must submit a Program Petition Form to the Enrollment Services Center/OneStop, First Floor, Patricia A. and Stephen C. Schott Admission & Enrollment Building.

CHANGE OF SCHOOL

Entering freshmen and transfer students are admitted to the University and to a specific school based on the preference indicated on their admission application. Students wishing to change schools within the University may not apply for such a change until the end of their first year of attendance. Changes between schools may be limited by the availability of space within the school and the specific academic major. Students wishing to change schools must meet the admittance criteria of the school and complete the application process specified by that school. Upon acceptance by the school, the student must submit a completed Program Petition Form to the Enrollment Services Center/OneStop, First Floor, Patricia A. and Stephen C. Schott Admission & Enrollment Building.

UNIVERSITY GRADUATION REQUIREMENTS

- Complete a minimum of 175 quarter units for B.A., B.S., or BSC degrees. Engineering physics majors have a 197–unit minimum. In the School of Engineering, unit requirements may vary by major.
- Complete a minimum of 60 units of upper division courses.
- Attain an overall grade–point average of at least 2.0.
- Attain a grade–point average of at least 2.0 in your major(s) and minor subjects.
- Complete the specific course requirements of the University Core Curriculum.
- Fulfill the minimum course requirements of both college or school and major department(s).
- Fulfill the residency requirement of a minimum 45 units at the Santa Clara campus after achieving junior status.

Check with your department and college for detailed information about additional graduation requirements that pertain to your college and major. Every graduating senior must complete and submit the Candidacy Petition for the Bachelor's Degree form available from the Office of the Registrar. See the academic calendar for deadlines.

REGISTRATION

Undergraduate students register on the web via eCampus at *www.scu.edu/eCampus*. Appointments are available on eCampus just prior to the registration period each quarter. Detailed procedures are found on the Office of the Registrar website: *www.scu.edu/registrar*.

The *Schedule of Classes* is available in electronic form on the Courseavail website at *www.scu.edu/courseavail*. In addition to the current schedule of class offerings, the tentative schedules for the coming terms, final exam schedule, and the academic calendar are published in the quarterly *Deadlines & Registration Information* booklet posted on the Office of the Registrar website.

The *Schedule of Classes* lists and footnotes classes that satisfy Old and New Core requirements. This information holds precedence over any listings in the *Core Curriculum Handbook*. Course descriptions are found in the *Undergraduate Bulletin*, on Courseavail, and eCampus. Review the academic regulations that follow to be sure you are eligible to register for the courses you choose.

Unit Overload Restrictions Students may enroll for no more than 19 units unless they are in the University Honors Program and/or their cumulative grade point average at Santa Clara is at least 3.3, or they have upper–division status and obtain approval from the Drahmann Center. One 2–unit course or two 1–unit courses are not counted as overload units. Students who meet the criteria above will not be permitted to register for more than 25 units without approval of the Drahmann Center. Students may register for courses that result in overload units only during the late registration period.

Students who require permission to overload must bring a signed Unit Overload Permission form and Add form to the Enrollment Services Center/OneStop, First Floor, Patricia A. and Stephen C. Schott Admission & Enrollment Building, to add the additional units. Unit overload forms are available at the Drahmann Center and must be signed by an advisor. Students may add overload units only during the first week of the term.

Course Restrictions Freshmen may not enroll in upper–division courses (numbered 100–199) without written permission of the instructor and chair of the department offering the course. Without permission, students may be subject to administrative withdrawal from the course. Engineering students within their major program are excluded.

Pass/No Pass Option A junior or senior with a declared major may choose to take an elective course on a P/NP basis. The option must be selected by the end of the fourth week of classes and is not reversible. Students may select only one course per quarter, up to a maximum of six, toward their degree. Under this option, work equivalent to a grade of C-minus (or lower) is not passing. Pass/No Pass Option forms are obtained at the Office of the Registrar. Courses taken P/NP generally do not fulfill a core or major/minor requirement.

Auditing Courses Students admitted to degree status at Santa Clara may audit one course in addition to their regular course load in a term. A maximum of three courses may be audited during a student's academic career. Permission to audit a course will be given only at the end of the late registration period and only if space is available in the class. No credit is assigned for an audited course, but the successful completion of an audit will be indicated on a student's transcript by the notation "AUD." Electronic Audit Option form is *www.scu.edu/registrar/forms/course-audit-option/* or at *www.scu.edu/registrar*, click on forms and then Course Audit Option. This submission must be made by the last day to add a class.

Repetition of Courses Students may only repeat a course in which they have received a grade of less than "C –." In such cases, the grades of both the original and the repeated course are included in the calculation of the student's grade point average, but units are awarded toward graduation only once for each course passed. Certain courses, such as special topics courses and performance courses, are repeatable, and students will receive a grade and units for each successful completion. Students should consult the chair of the department in which the course is offered to confirm that a given course may be repeated for credit.

Late Registration Students may register late during the first week of class. Students cannot attend courses prior to completing registration. The Office of the Registrar does not accept Add Forms after the deadline.

Adding Classes Students may add to or change your schedule on eCampus at any time after their initial appointment through the first week of classes. Schedule changes are posted on the Courseavail website at *www.scu.edu/courseavail*. Closed classes may be added with instructor's permission through the first week of the term.

Administrative Withdrawal "No Show" Policy Students who fail to attend the first class meeting without advanced notification to the department offering the course may be subject to administrative withdrawal from the course. If you do not wish to remain in a course for which you enrolled, be sure that you formally withdraw. Not all instructors follow the administrative withdrawal policy.

Dropping a Class No 'W' will show on the academic record if a class is dropped during the first four weeks of the quarter on eCampus. Classes dropped between the fifth and seventh week will show on the academic record with a 'W.' In order to drop a class a student must go to eCampus and select the 'drop' option. The instructor's signature is no longer required when dropping a class between weeks 5 through 7. Once a student has dropped a class an automatic email will be sent to the instructor of record as notification of the drop. No class may be dropped after week 7 through the final week of classes.

PRIVACY OF STUDENT RECORDS

According to the guidelines of the Family Educational Rights and Privacy Act (FERPA), the University will maintain the privacy of student records, notify students of the location of official records, and make adequate provision for students to examine their own records upon formal request.

The University is authorized to release "directory" information unless a student explicitly asks the registrar not to do so. Directory information includes only the following: student's full name; local and/or permanent address; email address; telephone number; birth date; birth place; major field of study; classification/level; dates of attendance; most recent prior school attended; expected degree date; degrees and honors conferred; past and present participation in officially recognized activities, including intercollegiate athletics; height and weight of participants on intercollegiate athletic teams; and photographic image. Log on to: *www.scu.edu/ferpa* for more detailed information.

WITHDRAWING FROM THE UNIVERSITY

Leave of Absence If you find it necessary to withdraw from the University, complete a withdrawal form and exit interview at the Drahmann Center. If you are in good standing when you withdraw, you have five years to return without formally reapplying to the University. If you attend other institutions during your absence, you are required to forward official transcripts from those schools to the Office of the Registrar. Students on leave who have attended another college or university are only permitted to transfer in a maximum of 10 units of elective credit. Please inform the Assistant Registrar in writing of your intent to return at least one month prior to the beginning of the quarter. Log into *www.scu.edu/registrar/returning-studentsform.cfm* to complete online form. Students who leave during the quarter without officially withdrawing are subject to receiving "F" grades.

Tuition Refunds The date on which written notification of withdrawal was received at the Office of the Registrar will be the effective date on which any refund of tuition will be determined, not the last date of attendance. Refund schedules are available on the Bursar website at: *www.scu.edu/bursar/refunds*.

SANTA CLARA UNIVERSITY UNDERGRADUATE ACADEMIC CALENDAR

FALL QUARTER | 2019

Apr 29–May 10	M–F	Mandatory academic advising period
May 13–24	M–F	Fall registration appointment period
Aug 21	**W**	**Payment deadline for Fall 2019**
Sep 21–22	Sa–Su	New student Welcome Weekend
Sep 21	Sa	Residence halls open at 8:30 a.m. to new students
Sep 22	Su	Residence halls open at 9 a.m. to returning students
Sep 23	**M**	**Classes begin**
Sep 23–27	M–F	Late registration/add period
Sep 27	**F**	**Last day to add a class**
Sep 27	**F**	**Last day to change registration or withdraw from the University with a 100% tuition refund (less fees)**
Oct 2	W	Mass of the Holy Spirit 12 noon at Mission Church. Classes will not meet from 11:45 a.m.–1:15 p.m. Classes scheduled to begin at 1 p.m. will begin instead at 1:15 p.m.
Oct 4	**F**	**Last day to withdraw from classes with a 50% tuition refund (less fees)**
Oct 11	**F**	**Last day to withdraw from classes with a 25% tuition refund (less fees) No tuition refund after this date.**
Oct 11	F	Last day to submit incomplete Spring 2019 and Summer Session 2019 work to faculty
Oct 11	F	Last day to petition for degrees to be conferred in December 2019
Oct 18	**F**	**Last day to drop classes without a W**
Oct 18	F	Last day to declare P/NP grading option
Oct 18	F	Last day to remove Spring 2019 and Summer Session 2019 incompletes (faculty)
Nov 8	**F**	**Last day to drop classes with a W**
Nov 11–22	M–F	Winter registration appointment period
Nov 25–29	M–F	Academic holiday
Nov 28–29	Th–F	Thanksgiving; administrative holidays
Dec 6	**F**	**Classes end**
Dec 9–13	M–F	Fall final examinations
Dec 13	F	Residence halls close 9 p.m.
Dec 18	W	Fall quarter grades due (faculty)
Dec 24–25	Tu–W	Christmas recess; administrative holidays
Dec 31–Jan 1	Tu–W	New Year's recess; administrative holidays

*For detail tuition refund information refer to the Bursar website at: www.scu.edu/bursar/refund/

**For details on the health insurance waiver, refer to the Cowell Center site: www.scu.edu/cowell/insurance

KEY FALL DATES

Aug 21	**W**	**Payment deadline for Fall 2019**
Sep 23	**M**	**Classes begin**
Sep 23–27	M–F	Late registration/add period
Sep 27	**F**	**FINAL fall health insurance waiver deadline**
Sep 27	**F**	**Last day to change registration or withdraw from the University with a 100% tuition refund (less fees)**
Oct 4	**F**	**Last day to withdraw from the University and receive a 50% tuition refund (less fees)**
Oct 11	**F**	**Last day to withdraw from the University and receive a 25% tuition refund (less fees) No tuition refund after this date.**
Oct 11	F	December graduation petitions due
Oct 18	**F**	**Last day to drop classes without a W**
Nov 8	**F**	**Last day to drop classes with a W**
Dec 9–13	M–F	Fall final examinations

WINTER QUARTER | 2020

Nov 11–22	M–F	Winter registration appointment period
Dec 21	**Sa**	**Payment deadline for Winter 2020**
Jan 6	**M**	**Classes begin**
Jan 6–10	M–F	Late registration/add period
Jan 10	**F**	**Last day to add a class**
Jan 10	**F**	**Last day to change registration or withdraw from the University with a 100% tuition refund (less fees)**
Jan 17	**F**	**Last day to withdraw from classes with a 50% tuition refund (less fees)**
Jan 20	M	Martin Luther King Day; academic and administrative holiday
Jan 24	F	Last day to submit incomplete Fall 2019 work to faculty
Jan 24	**F**	**Last day to withdraw from classes with a 25% tuition refund (less fees) No tuition refund after this date.**
Jan 24	F	Last day to petition for degrees to be conferred in March 2020
Jan 31	**F**	**Last day to drop classes without a W**
Jan 31	F	Last day to declare P/NP grading option
Jan 31	F	Last day to remove Fall 2019 incompletes (faculty)
Feb 14–27	F–Th	Spring registration appointment period
Feb 17	M	Presidents' Day; academic and administrative holiday
Feb 21	**F**	**Last day to drop classes with a W**
Feb 21	F	Last day to petition for degrees to be conferred in June 2020
Mar 13	**F**	**Classes end**
Mar 16–20	M–F	Winter final examinations
Mar 23–27	M–F	Spring recess
Mar 25	W	Winter quarter grades due (faculty)

KEY WINTER DATES

Nov 11–22	M–F	Winter registration appointment period
Dec 21	**Sa**	**Payment deadline for Winter 2020**
Jan 6	**M**	**Classes begin**
Jan 6–10	M–F	Late registration/add period
Jan 10	**F**	**FINAL winter health insurance waiver deadline**
Jan 10	**F**	**Last day to change registration or withdraw from the University with a 100% tuition refund (less fees)**
Jan 17	**F**	**Last day to withdraw from the University and receive a 50% tuition refund (less fees)**
Jan 24	**F**	**Last day to withdraw from the University and receive a 25% tuition refund (less fees) No tuition refund after this date.**
Jan 24	F	March graduation petitions due
Jan 31	**F**	**Last day to drop classes without a W**
Feb 21	**F**	**Last day to drop classes with a W**
Feb 21	F	June graduation petitions due
Mar 16–20	M–F	Winter final examinations

SPRING QUARTER | 2020

Feb 14–27	F–Th	Spring registration appointment period
Mar 21	**Sa**	**Payment deadline for Spring 2020**
Mar 30	**M**	**Classes begin**
Mar 30–Apr 3	M–F	Late registration/add period
Apr 3	**F**	**Last day to add a class**
Apr 3	**F**	**Last day to change registration or withdraw from the University with a 100% tuition refund (less fees)**
Apr 10	F	Good Friday; administrative and academic holiday
Apr 10	**F**	**Last day to withdraw from classes with a 50% tuition refund (less fees)**
Apr 17	**F**	**Last day to withdraw from classes with a 25% tuition refund (less fees) No tuition refund after this date.**
Apr 17	F	Last day to submit incomplete Winter 2020 work to faculty
Apr 24	**F**	**Last day to drop classes without a W**
Apr 24	F	Last day to declare P/NP grading option
Apr 24	F	Last day to remove Winter 2020 incompletes (faculty)
Apr 24	F	Last day to petition for degrees to be conferred in September 2020
Apr 27–May 8	M–F	Annual mandatory academic advising period
May 11–22	M–F	Fall registration appointment period
May 15	**F**	**Last day to drop classes with a W**
May 25	M	Memorial Day; academic and administrative holiday
Jun 5	**F**	**Classes end**
Jun 8–11	M–Th	Spring final examinations
Jun 11	Th	Residence halls close 9 p.m. (non–graduating students)
Jun 13	Sa	169th Undergraduate Commencement
Jun 14	Su	Residence halls close 12 p.m. (graduating students)
Jun 16	Tu	Spring quarter grades due (faculty)

KEY SPRING DATES

Feb 14–27	F–Th	Spring registration appointment period
Mar 21	**Sa**	**Payment deadline for Spring 2020**
Mar 30	**M**	**Classes begin**
Mar 30–Apr 3	M–F	Late registration/add period
Apr 3	**F**	**FINAL spring health insurance waiver deadline**
Apr 3	**F**	**Last day to change registration or withdraw from the University with a 100% tuition refund (less fees)**
Apr 10	**F**	**Last day to withdraw from the University and receive a 50% tuition refund (less fees)**
Apr 17	**F**	**Last day to withdraw from the University and receive a 25% tuition refund (less fees) No tuition refund after this date.**
Apr 24	**F**	**Last day to drop classes without a W**
Apr 24	F	September graduation petitions due
May 15	**F**	**Last day to drop classes with a W**
Jun 8–11	M–Th	Spring final examinations

SUMMER SESSION | 2020

Mar 16	M	Online application period begins for non–SCU students
Apr 13	M	Registration appointment period begins (SCU students)
Apr 20	M	Registration begins for non–SCU students
May 21	**Th**	**Financial clearance deadline**

SESSION 1

Jun 18	**Th**	**Classes begin**
Jun 22	**M**	**Last day to add a class**
Jun 22	M	Last day to declare P/NP grading option
Jul 3*	F	Independence Day observed; administrative holiday
Jul 3*	**F**	**Last day to drop classes without a W**
Jul 17	**F**	**Last day to drop classes with a W**
Jul 22	**W**	**Classes end**
Jul 23–24	Th–F	Summer session 1 final examinations
Jul 29	W	Summer session 1 grades due (faculty)

SESSION 2

Jul 27	**M**	**Classes begin**
Jul 29	**W**	**Last day to add a class**
Jul 29	W	Last day to declare P/NP grading option
Aug 7	**F**	**Last day to drop classes without a W**
Aug 21	**F**	**Last day to drop classes with a W**
Aug 28	**F**	**Classes end**
Aug 31–Sep 1	M–Tu	Summer session 2 final examinations
Sep 7	M	Summer session 2 grades due (faculty)
Sep 7	M	Labor Day; administrative holiday

SESSION 3 START AND END DATES

For important deadlines regarding summer sessions 3a, 3b, 3c, refer to the summer calendar at www.scu.edu/summer

Jun 15–Jul 3	**M–F**	**Session 3a**
Jul 6–Jul 24	**M–F**	**Session 3b**
Jul 27–Aug 14	**M–F**	**Session 3c**

July 3 is an administrative holiday but not an academic holiday; offices will be closed, but classes still meet. Some classes follow different schedules than those indicated above. See summer class schedule for details. All dates are inclusive; registration dates are subject to change.

WHEN CLASSES MEET

Undergraduate classes meet according to the following schedule: Monday, Wednesday, Friday classes meet for 65-minute periods; and Tuesday, Thursday classes meet for 100-minute periods.

MWF			
8–9:05 a.m.	10:30–11:35 a.m.	2:15–3:20 p.m.	6:00–7:05 p.m.
9:15–10:20 a.m.	11:45–12:50 p.m.	3:30–4:35 p.m.	7:15–8:20 p.m.
	1:00–2:05 p.m.	4:45–5:50 p.m.	8:30–9:35 p.m.

All ARTS courses MWF		
8:00–10:20 a.m.	1:00–3:20 p.m.	6:00–8:20 p.m.
10:30–12:50 p.m.	3:30–5:50 p.m.	

TTh		
8:30–10:10 a.m.	10:20–12:00 p.m.	2:00–3:40 p.m.	5:40–7:20 p.m.
	12:10–1:50 p.m.	3:50–5:30 p.m.	7:30–9:10 p.m.

All ARTS courses TTH		
8:30–10:50 a.m.	2:00–4:20 p.m.	7:00–9:20 p.m.
11:00–1:20 p.m.	4:30–6:50 p.m.	

SEPTEMBER
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

OCTOBER
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

NOVEMBER
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

DECEMBER
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

JANUARY
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

FEBRUARY
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

MARCH
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

APRIL
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

MAY
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

JUNE
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

JULY
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

AUGUST
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					