

# INNOVATIVE APPROACHES FOR HIGH SCHOOL SCHEDULES

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In the following report, Hanover Research profiles five public schools and four private schools that have adopted innovative schedules in order to allow for a significant numbers of credit-bearing courses.



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## INTRODUCTION

In this report, Hanover Research profiles five public schools and four private schools that have adopted innovative schedules in order to allow the incorporation of a significant numbers of credit-bearing courses. As high schools in Washington state now face the challenge of providing students with at least 24 credits, this report focuses on both public and private schools with similar requirements. Throughout the report, each profile will explain the school's credit requirements, and how the innovative schedule could be applied to Washington state high schools. In some instances, the schools have also used these schedules to incorporate remedial courses for students struggling with their academic work or who have failed their courses. In these instances, this information is provided, although it is not the focus of the report. The report examines these schools in two sections:

- **Section I: Public High Schools** will profile the following high schools: Ely Blanche High School (Pompano Beach, FL), New Berlin High School (New Berlin, WI), Gunn High School (Palo Alto, CA), Design Tech High School (San Francisco, CA), and Brooklyn Generation High School (New York, NY).
- **Section II: Private High Schools** will profile the following schools: Bullis School (Potomac, MD), Catlin Gabel School (Portland, OR), Overlake School (Redmond, WA), and Madeira School (McLean, VA).

## KEY FINDINGS

- **The majority of profiled schools use some type of rotational schedule to increase the number of credit-bearing courses offered in a year, while still staying within the limits of the traditional school day. Many schools use schedules that shift depending on the day of the week, allowing students to attend each core course three or four times a week.**
  - New Berlin High School's schedule includes eight credit-bearing courses, but students only take six 60-minute courses each day. The schedule shifts slightly each day throughout the week, in order to ensure that students attend each class four times.
  - At Gunn High School, students complete seven courses during the year, but attend only four or five core courses each day. These courses are typically one hour and 15 minutes in length, and students attend each core course three times during a normal week. Similarly, Design Tech High School moves courses around throughout the week, but ensures that students attend all core course at least three times.
  - Profiled private schools use creative scheduling cycles to maximize students' course load. Both Catlin Gabel School and Overlake School use schedules that rotate every seven or eight days, with courses shifting each day to accommodate seven credit-bearing courses.

- **The concept of using “flex blocks” or “flex time” that allows students and teachers to alter their schedules or classes is a core strategy for extending the availability of credit-bearing courses.** In this report, New Berlin High School, Design Tech High School, and Catlin Gabel School use flexible schedules where students can choose their own classes or teachers can extend the length of their courses.
  - Catlin Gabel School uses a schedule where three 45-minute periods have adjacent 30 minute Flex Time periods that allow teachers to extend their classes. The school rotates academic courses through these Flex Time periods, giving each teacher the opportunity to use them during the week.
  - Design Tech High School allows students to choose their courses each week and incorporate them into free class slots known as “Flexblocks.” At the start of each week, a student and their teachers will discuss and select classes and incorporate them into their Flexblocks.
- **Some high schools alter their weekly or daily schedules to create more time for remediation courses for students struggling with their work.** For instance, schools such as Ely Blanche High School and New Berlin High School make time during the middle of the day or leave Fridays open to offer students remediation classes or tutoring.
  - Ely Blanche High School uses a “4x1 block” schedule that designates Friday as an “optional day” where students use the two 110-minute classes to retake a failed class, take test preparation and enrichment courses, or complete an internship.
  - New Berlin High School uses a rotational schedule with eight courses to create a period called “Flex Time” in the middle of the school day that students can use for remediation, enrichment, and advisory instruction.
- **Other high schools alter their yearly schedule in order to incorporate more time for academic courses across different subject areas.** In contrast to schools that only modify their weekly or monthly schedule to incorporate more classes, Brooklyn Generation and the Madeira School use expanded yearly schedules to alter the duration of courses or offer alternate courses throughout the year.
  - Brooklyn Generation High School allows students to take two separate months of “intensives” courses taught by other staff while their teachers take their vacation breaks. During the rest of the year, students and teachers follow daily schedule of foundation courses and studio courses.
  - Madeira School uses a modified block schedule that rotates in a year-long system with five week module terms. Students take core academic courses across three modules, which can follow a back-to-back sequence or occur at intermittent times over the year.

## SECTION I: PUBLIC HIGH SCHOOL PROFILES

The following section examines six public high schools that have adopted innovative approaches to incorporating more than 24 credit-bearing courses into their academic schedules. Hanover Research located these programs by examining secondary sources published by organizations such as National Center on Time and Learning and the Hechinger Report that discuss innovative school schedules. Hanover Research also located these schools by utilizing targeted internet searches. While some of schools operate in districts or states with fewer than 24 required credits for graduation, Hanover Research included these schools since their schedules accommodate 24 credit-bearing courses. Hanover Research defines a credit-bearing course as an academic course that is at least 40 to 45 minutes in length. This definition excludes advisory periods, intervention classes, or enrichment periods, which often appear in these schedules.

### ELY BLANCHE HIGH SCHOOL (POMPANO BEACH, FL)

Ely Blanche High School is based in Florida, which has a state-wide 24 credit requirement for graduation.<sup>1</sup> Within these state regulations, the school uses a “4x1 block” schedule that also allows students to take remediation courses. While the school follows a traditional four-period block schedule Monday through Thursday, it designates Friday as an “optional day” where students use two 110-minute classes to retake a failed class, take intensive test prep courses, take enrichment courses, or complete an internship.

#### *FLORIDA 24 CREDIT REQUIREMENTS*

In Florida, public high school students who are pursuing a standard course of study must acquire 24 credits to complete their secondary studies. As Figure 1.1 shows, these requirements include four credits for English, four credits for Math courses, three for social studies, three for science, eight for elective units, and one credit each for P.E. and arts.

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<sup>1</sup> Individual State Profile – Standard High School Graduation Requirements (50 – State).” Education Commission of the States. <http://ecs.force.com/mbdata/mbprofall?Rep=HS01>

**Figure 1.1: Florida High School 24 Credit Graduation Requirements (Standard Course of Study)**

SUBJECT	TOPICS
English Units	<ul style="list-style-type: none"> <li>▪ 4 units</li> <li>▪ Schools must have major concentration in composition, reading for information, and literature.</li> </ul>
Math Units	<ul style="list-style-type: none"> <li>▪ 4 units including unit of Algebra I or equivalent courses.</li> <li>▪ 2014 Changes: Schools must include geometry or equivalent courses.</li> <li>▪ 2016 Changes: Schools must include Algebra II or equivalent courses</li> </ul>
Social Studies Units	<ul style="list-style-type: none"> <li>▪ 3 units</li> <li>▪ Schools must include 1 unit each of U.S. and world history and .5 unit each of economics and U.S. government.</li> </ul>
Science Units	<ul style="list-style-type: none"> <li>▪ 3 units, including 2 lab science units.</li> <li>▪ 2015 Changes: Schools must include Biology I or equivalent courses.</li> <li>▪ 2017 Changes: Schools must include chemistry or physics or equivalent courses.                             <ul style="list-style-type: none"> <li>○ 1 unit must be an equally rigorous course, as determined by state board.</li> </ul> </li> </ul>
P.E./Health Units	<ul style="list-style-type: none"> <li>▪ 1 unit , which includes "integration of health."</li> </ul>
Arts	<ul style="list-style-type: none"> <li>▪ 1 unit of fine or performing arts, speech and debate, or a practical arts course that incorporates artistic content and techniques of creativity, interpretation and imagination.</li> <li>▪ The state identifies eligible practical arts courses in the Course Code Directory.</li> </ul>
Foreign Language	<ul style="list-style-type: none"> <li>▪ None</li> </ul>
Electives Units	<ul style="list-style-type: none"> <li>▪ 8 units</li> </ul>
Other Units	<ul style="list-style-type: none"> <li>▪ 1 unit fine or performing arts, speech and debate, or a practical arts course that incorporates artistic content and techniques of creativity, interpretation and imagination.</li> <li>▪ Eligible practical arts courses identified in the Course Code Directory.</li> </ul>
Total	<ul style="list-style-type: none"> <li>▪ 24 units</li> </ul>

Source: Education Commission of the States<sup>2</sup>

The state allows students to earn credits through applied, integrated, and combined courses approved by the Department of Education. As an alternative to the 24-credit track, students can pursue the International Baccalaureate (IB) curriculum, an 18-credit Academically Challenging Curriculum to Enhance Learning (ACCEL) or Advanced International Certificate of Education curriculum.<sup>3</sup>

<sup>2</sup> Ibid.

<sup>3</sup> "Graduation Requirements." Florida Department of Education. <http://www.fldoe.org/academics/graduation-requirements>

*ELY BLANCHE 4x1 MODEL*

The school’s decision to adopt its 4x1 model stems from problems related to its implementation of a “4x4” model. The high school initially used a 4x4 model where students took one set of four courses that changed from semester to semester. This model allowed students to earn eight credits every year instead of six or seven credits. While this model saw discipline problems decrease significantly over time, the school’s scores on Florida standardized exams were continuing to fall behind other schools in the area.<sup>4</sup>

In response, the school’s principal led an effort to adopt a 4x1 block schedule that focused heavily on remediation. As Figure 1.2 shows, the school’s new schedule used a model where students took four 110-minute classes from Monday through Thursday. On Friday, students had access to a “summer school” schedule that focuses on remediation courses and instruction for students.

**Figure 1.2: Ely Blanche Comparison of 4x4 and 4x1 Block Schedules**

4x4 SCHEDULE	4x1 SCHEDULE	
Monday to Friday 7:40 a.m. to 2:40 p.m.	Monday to Thursday 7:15 a.m. to 3:25 p.m.	Optional Day (Friday) 7:50 a.m. to 3:25 p.m.
Homeroom 7:40 a.m.-8:10 a.m.		
Block 1, academic 8:10 a.m.-9:40 a.m.	Block 1 7:15 a.m.-9:00 a.m.	Block 1 7:50 a.m.-11:55 a.m.
Block 2, elective 9:50 a.m.-11:20 a.m.	Block 2 9:05 a.m.-11:00 a.m.	Lunch 12:00 p.m.-12:30 p.m.
Block 3, academic 11:30 a.m.-1:00 p.m.	Block 3 11:05 p.m.-1:30 p.m.	Block 2 12:35 p.m.-3:25 p.m.
Block 4, elective 1:10 p.m.-2:40 p.m.	Block 4 1:35 p.m.-3:25 p.m.	10-minute breaks during morning and afternoon sessions.
Tutoring 2:45 p.m.-3:45 p.m.	Tutoring 2:45 p.m.-3:45 p.m.	
Extracurricular Activities 4:00 p.m.-5:00 p.m.	Extracurricular Activities 4:00 p.m.-5:00 p.m.	

Source: The Science Teacher<sup>5</sup>

In order to assist with the creation of this model, the school moved activities that it held during the day such as career fairs, graduation rehearsals, and field trips to Friday. The school also allowed its students to fulfill state requirements for service hours on Fridays. The new schedule has allowed the school to develop an internship program where students earn 1.5 graduation credits by working in local businesses to learn about their working environments and develop practical job skills.

<sup>4</sup> Frank, M. “Thinking Outside the Block.” *The Science Teacher*, February 2002. p. 40.  
[http://people.uncw.edu/kubaskod/SEC\\_406\\_506/Classes/Class\\_6\\_Planning/Thinking\\_outside\\_the\\_block.pdf](http://people.uncw.edu/kubaskod/SEC_406_506/Classes/Class_6_Planning/Thinking_outside_the_block.pdf)  
<sup>5</sup> Ibid., p. 39.

### *BENEFITS OF THE NEW SCHEDULE*

The school claims that the model's major benefit was that students could retake failed classes before summer school. Specifically, students who failed courses in their first semester move immediately into remediation in their second semester. Students who face the prospect of failing the high school competency test can also take intensive "test prep" courses on Fridays to receive additional preparation. In addition to these groups of students, students who are academically successful have the option of taking enrichment courses and electives or going home or their jobs.<sup>6</sup>

According to school officials, the student test scores have increases since the adoption of this schedule. Specifically, the school saw significant improvements in standardized math, writing, and reading scores a year after the new system came in place, and the scores have increased at a slow but steady pace—a factor that officials attribute to Friday remediation classes.

### **NEW BERLIN HIGH SCHOOL (NEW BERLIN, WI)**

New Berlin High School has a weekly schedule that accommodates eight credit-bearing courses, totaling to 32 credit-bearing courses during a student's high school career. While Wisconsin requires only 13 credits for graduation, this school uses a rotational schedule that allows students to take eight courses in six-period days.<sup>7</sup> Students also have "Flex Time" in the middle of each day that they can use for remediation, enrichment, and advisory.

### *OVERVIEW OF THE FLEX TIME SCHEDULE*

The school maintains a daily schedule where students take eight one hour courses. In contrast to other eight-course systems, however, students take six courses a day on a rotational basis, including Flex Time courses, which meet in the middle of the day.<sup>8</sup> Flex Time courses are 74-minute classes that give students the opportunity to meet with a class or teacher to address their academic problems. Students can also work with teachers, counselors, school staff, and students on assignments as well as attend club meetings during this time.<sup>9</sup>

Grade 9 and 10 students and Grade 11 and 12 students have two separate responsibilities during Flex Time. Grade 9 and 10 students can work on a chosen assignment unless their teacher gave them a specific project to address their needs. In contrast, Grade 11 and 12 students are not required to attend Flex Time unless they need to participate in an advisory lesson or class meetings for a specific purpose.<sup>10</sup> In addition to managing their own

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<sup>6</sup> Ibid., p. 40.

<sup>7</sup> Individual State Profile – Standard High School Graduation Requirements (50 – State)," Op. cit.

<sup>8</sup> "2015 – 2016 MS/HS Schedule." School District of New Berlin. <http://www.nbexcellence.org/district/2015-16-middle-high-school-schedule.cfm>

<sup>9</sup> "MS/HS Schedule Flex." School District of New Berlin. <http://www.nbexcellence.org/district/middle-high-school-schedule-flexime.cfm>

<sup>10</sup> Ibid.



schedules, both sets of students can work in a teacher’s classroom or other designated spaces if they do not have to meet with a teacher or attend advisory, testing, or academic planning sessions.<sup>11</sup>

*STANDARD FLEX TIME SCHEDULES*

The school maintains two sets of Flex Time schedules: standard Flex Time and a double blocked course Flex Time Schedule. In the case of the standard schedule, this model has eight one-hour courses with a Flex Time course in the middle of the day. Figures 1.3 and 1.4 provide an example of a Grade 10 student’s two week schedule in this model.

**Figure 1.3: New Berlin High School Sample Schedule (Grade 10, Week 1)**

WEEK 1	CLASS DURATION	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
7:30 a.m.- 8:30 a.m.	60 minutes	Algebra II	Chemistry H	Chemistry H	Chemistry H	Algebra II
8:34 a.m.- 9:34 a.m.	60 minutes	English 10	Algebra II	English 10	English 10	English 10
9:38 a.m.- 10:38 a.m.	60 minutes	Speech	Speech	Algebra II	Speech	Speech
10:38 a.m.- 11:52 a.m.	74 minutes	Lunch & Flex	Lunch & Flex	Lunch & Flex	Lunch & Flex	Lunch & Flex
11:52 a.m.- 12:52 p.m.	60 minutes	AP U.S. History	Band	Band	Band	AP U.S. History
12:56 p.m.- 1:56 p.m.	60 minutes	Spanish III	AP U.S. History	Spanish III	Spanish III	Spanish III
2:00 p.m.- 3:00 p.m.	60 minutes	Principles of Engineering	Principles of Engineering	AP U.S. History	Principles of Engineering	Principles of Engineering

Source: New Berlin High School<sup>12</sup>

The courses in the orange column subsequently move to Monday and Friday slots in the second week while the other courses shift to Tuesday, Wednesday, and Thursday. This schedule is depicted in Figure 1.4 on the following page. After these two weeks, the third week’s schedule follows a similar sequence and switches to an order of yellow, green, red, orange, and yellow. The fourth week’s schedule switches to an order of green, red, orange, yellow, and green. Finally, the last week in the cycle returns to the order in Figure 1.3.

<sup>11</sup> Ibid.

<sup>12</sup> “2015-16 Example Two-Week Schedule: High School Student (Sophomore Example).” School District of New Berlin. [http://www.nbexcellence.org/cms\\_files/resources/HighSchoolScheduleSophomoreExample.pdf](http://www.nbexcellence.org/cms_files/resources/HighSchoolScheduleSophomoreExample.pdf)

**Figure 1.4: New Berlin High School Sample Schedule (Grade 10, Week 2)**

WEEK 1	CLASS DURATION	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
7:30 a.m.- 8:30 a.m.	60 minutes	Chemistry H	Chemistry H	Chemistry H	Algebra II	Chemistry H
8:34 a.m.- 9:34 a.m.	60 minutes	Algebra II	English 10	English 10	English 10	Algebra II
9:38 a.m.- 10:38 a.m.	60 minutes	Speech	Algebra II	Speech	Speech	Speech
10:38 a.m.- 11:52 a.m.	74 minutes	Lunch & Flex	Lunch & Flex	Lunch & Flex	Lunch & Flex	Lunch & Flex
11:52 a.m.- 12:52 p.m.	60 minutes	Band	Band	Band	AP U.S. History	Band
12:56 p.m.- 1:56 p.m.	60 minutes	AP U.S. History	Spanish III	Spanish III	Spanish III	AP U.S. History
2:00 p.m.- 3:00 p.m.	60 minutes	Principles of Engineering	AP U.S. History	Principles of Engineering	Principles of Engineering	Principles of Engineering

Source: New Berlin High School<sup>13</sup>

*THE DOUBLE BLOCKED COURSE FLEX TIME SCHEDULE*

The school also offers a double blocked course schedule with back to back blocks of classes. Figure 1.5 and 1.6 shows an example of this schedule for a Grade 11 student; the double blocked courses appear in bold text.

**Figure 1.5: New Berlin High School Sample Double Blocked Course Schedule (Grade 11, Week 1)**

WEEK 1	CLASS DURATION	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
7:30 a.m.- 8:30 a.m.	60 minutes	English II Honors	AP Biology	AP Biology	AP Biology	English II Honors
8:34 a.m.- 9:34 a.m.	60 minutes	Pre-Calculus	English II Honors	Pre-Calculus	Pre-Calculus	Pre-Calculus
9:38 a.m.- 10:38 a.m.	60 minutes	Study Hall	Study Hall	English II Honors	Study Hall	Study Hall
10:38 a.m.- 11:52 a.m.	74 minutes	Lunch & Flex	Lunch & Flex	Lunch & Flex	Lunch & Flex	Lunch & Flex
11:52 a.m.- 12:52 p.m.	60 minutes	Spanish IV	<b>AP Biology</b>	<b>AP Biology</b>	<b>AP Biology</b>	Spanish IV
12:56 p.m.- 1:56 p.m.	60 minutes	<b>AP Biology</b>	Spanish IV	<b>AP Biology</b>	<b>AP Biology</b>	<b>AP Biology</b>
2:00 p.m.- 3:00 p.m.	60 minutes	AP Computer Science	AP Computer Science	Spanish IV	AP Computer Science	AP Computer Science

Source: New Berlin High School<sup>14</sup>

<sup>13</sup> Ibid.

<sup>14</sup> "2015-16 Example Two-Week Schedule: High School Student (Junior Example – with a Double Blocked Course)." School District of New Berlin. [http://www.nbexcellence.org/cms\\_files/resources/HighSchoolScheduleJuniorExamplewithDoubleBlock.pdf](http://www.nbexcellence.org/cms_files/resources/HighSchoolScheduleJuniorExamplewithDoubleBlock.pdf)

As with the standard schedule, the courses in the orange column subsequently move to Monday and Friday in the following week, while the other courses shift to Tuesday, Wednesday, and Thursday.

**Figure 1.6: New Berlin High School Sample Double Blocked Course Schedule (Grade 11, Week 2)**

WEEK 1	CLASS DURATION	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
7:30 a.m.- 8:30 a.m.	60 minutes	AP Biology	AP Biology	AP Biology	English II Honors	AP Biology
8:34 a.m.- 9:34 a.m.	60 minutes	English II Honors	Pre-Calculus	Pre-Calculus	Pre-Calculus	English II Honors
9:38 a.m.- 10:38 a.m.	60 minutes	Study Hall	English II Honors	Study Hall	Study Hall	Study Hall
10:38 a.m.- 11:52 a.m.	74 minutes	Lunch & Flex	Lunch & Flex	Lunch & Flex	Lunch & Flex	Lunch & Flex
11:52 a.m.- 12:52 p.m.	60 minutes	AP Biology	AP Biology	AP Biology	Spanish IV	AP Biology
12:56 p.m.- 1:56 p.m.	60 minutes	Spanish IV	AP Biology	AP Biology	AP Biology	Spanish IV
2:00 p.m.- 3:00 p.m.	60 minutes	AP Computer Science	Spanish IV	AP Computer Science	AP Computer Science	AP Computer Science

Source: New Berlin High School<sup>15</sup>

As with the standard schedule, the school follows a four-day schedule rotation for the next two weeks. The third week’s schedule uses the following order: yellow, green, red, orange, and yellow columns. The fourth week’s sequence follows green, red, orange, yellow, and green. After these weeks, the schedule returns to the order that appears in Figure 1.5.

**BENEFITS OF THE SCHEDULE**

The school states that these two models address two challenges related to its previous extended learning opportunity-based (ELO) schedule. First, the schedule helps students and teachers with busy schedules meet for remediation sessions. Second, the schedule also allows students to balance academic, internships, athletic, and activities meetings and tasks.<sup>16</sup> The district also notes that this schedule allows students to have more guided study time, take courses in other areas of the campus as well as through outside institutions, and receive support for their specific needs.<sup>17</sup>

**GUNN HIGH SCHOOL (PALO ALTO, CA)**

Gunn High School has a weekly schedule with seven credit-bearing courses, totaling to 28 credit-bearing courses during a student’s high school career. While California requires only

<sup>15</sup> Ibid.  
<sup>16</sup> Ibid.  
<sup>17</sup> “2015 – 2016 MS/HS Schedule,” Op. cit.

13 credits for graduation, the school’s seven-period rotation schedule allows for four classes to be held per day, with additional time for collaboration, tutorials, and staff meetings.<sup>18</sup>

*ROTATIONAL SEVEN-PERIOD SCHEDULE*

As Figure 1.7 shows, the school uses a rotational seven-period schedule that changes over the course of the week; these classes appear in non-grey and non-white boxes. The high school’s schedule also includes a series of extra periods, marked as grey cells, where students can meet with teachers for tutorials. As demonstrated in the figure, these sessions tend to occur at the end of the academic day.

**Figure 1.7: Henry M. Gunn High School 2015 – 2016 Bell Schedule**

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
A Period 8:25 a.m.-9:45 a.m.	E Period 8:25 a.m.-9:45 a.m.	B Period 8:25 a.m.-9:45 a.m.	E Period 8:25 a.m.-9:50 a.m.	C Period 8:25 a.m.-9:45 a.m.
Brunch (9:45 a.m.-10:00 a.m.)	Brunch (9:45 a.m.-10:00 a.m.)	Brunch (9:45 a.m.-10:00 a.m.)	Brunch (9:45 a.m.-10:00 a.m.)	Brunch (9:45 a.m.-10:00 a.m.)
B Period 10:00 a.m.-11:15 a.m.	SEL/Tutorial 10:00 a.m.-10:50 a.m.	C Period 10:00 a.m.-11:15 a.m.	A Period 10:05 a.m.-11:20 a.m.	D Period 10:00 a.m.-11:15 a.m.
C Period 11:25 a.m.-12:40 p.m.	A Period 11:00 a.m.-12:15 p.m.	D Period 11:25 a.m.-12:40 p.m.	B Period 11:30 a.m.-12:45 p.m.	E Period 11:25 a.m.-12:35 p.m.
Lunch 12:40 p.m.-1:20 p.m.	Lunch 12:15 p.m.-12:55 p.m.	Lunch 12:40 p.m.-1:20 p.m.	Lunch 12:45 p.m.-1:25 p.m.	Lunch 12:35 p.m.-1:15 p.m.
D Period 1:20 p.m.-2:35 p.m.	F Period 12:55 p.m.-2:10 p.m.	F Period 1:20 p.m.-2:40 p.m.	G Period 1:25 p.m.-2:45 p.m.	F Period 1:15 p.m.-2:25 p.m.
Staff Collaboration 2:45 p.m.-3:35 p.m.	G Period 2:20 p.m.-3:35 p.m.	Staff/Department Meetings 2:45 p.m.-3:35 p.m.	Tutorial 2:50 p.m.-3:35 p.m.	G Period 2:35 p.m.-3:45 p.m.

Source: Henry M. Gunn High School<sup>19</sup>

**DESIGN TECH HIGH SCHOOL (SAN FRANCISCO, CA)**

Design Tech High School, also known as d.tech by its staff and students, has a weekly schedule that can accommodate six courses over the year, amounting to 25 credit-bearing courses during a student’s high school career. While California requires only 13 credits for graduation, the school utilizes a unique schedule to incorporate more classes.<sup>20</sup> In terms of key innovative features, the school allows students the opportunity to choose how they will

<sup>18</sup> Individual State Profile – Standard High School Graduation Requirements (50 – State),” Op. cit.

<sup>19</sup> “Henry M. Gunn High School 2015-2016 Bell Schedule.” Henry M. Gunn High School. <http://www.gunn.pausd.org/sites/default/files/New%20Bell%20Schedule%2015-16%20x.pdf>

<sup>20</sup> Individual State Profile – Standard High School Graduation Requirements (50 – State),” Op. cit.

spend certain segments of the day, called Flexblocks. These schedules change on a weekly basis based on student needs and input.

### OVERVIEW OF THE SCHOOL SCHEDULE

In contrast to other schedules, teacher and students meet and discuss how they will arrange the weekly schedule's content based on the student's progress and the manner in which they want to invest time in their studies. As Ken Montgomery, the school's Executive Director, explained to The Hechinger Report, this model helps students gain more ownership over the learning process. He notes that, "it's that balance of giving them ownership, asking them to be self-directed." More importantly, the schedule allows teachers to work with students struggling with course materials or to challenge students who are already proficient in their courses.<sup>21</sup>

The schedule features two unique courses: the Learning Hub and the Design Lab. The Learning Hub courses include eight groups of approximately 75 students, where students are able to complete work independently or access tutoring. Students may also work on science labs or other group projects in breakout rooms.

The Design Lab features a variety of activities, including:

- Fundamentals of Design Thinking
- The Design THinking Process
- Making and Engineering
- Entrepreneurship<sup>22</sup>

### THE SCHOOL'S STUDENT SCHEDULE

Figure 1.8 on the following page displays a sample student schedule at the school. The core components of the schedule are Flexblocks, which are classes that each student selects for the week. These classes appear as the last name of the instructor, the academic subject, and the room where the class occurs, which the school designates as colors. The letters in parentheses next to the courses serves as a way to track the academic slots in a student's schedule. The school also offers students '@d.tech classes' that can focus on topics such as community building, open sessions, or academic days.<sup>23</sup> Students have half days on Friday, where they participate in design lab courses, meet for their Friday @d.tech course, and participate in meetings with other students and staff.

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<sup>21</sup> Dobo, N. "A School Where Students, Teachers Remix Their Schedules Every Week." *The Hechinger Report*, February 16, 2015. <http://hechingerreport.org/school-students-teachers-remix-schedules-every-week/>

<sup>22</sup> "Material Revision." Design Tech High School. Nov 19, 2015. P. 5. <https://agendaonline.net/public/Meeting/Attachments/DisplayAttachment.aspx?AttachmentID=249024&IsArchive=0>

<sup>23</sup> "Flexblock Schedule." Design Tech High School. [https://docs.google.com/spreadsheets/d/1jwU5Bnr9tj6wSisIQHML4rUevW\\_u3r5JnNr\\_tf02w8/edit#gid=953545774&vpid=A1](https://docs.google.com/spreadsheets/d/1jwU5Bnr9tj6wSisIQHML4rUevW_u3r5JnNr_tf02w8/edit#gid=953545774&vpid=A1)

Figure 1.8: Design Tech High School Student Schedule

MONDAY		TUESDAY		WEDNESDAY		THURSDAY		FRIDAY	
		<i>8 a.m.-8:30 a.m.</i>	<i>Optional PE</i>	<i>8 a.m.-8:30 a.m.</i>	<i>Optional PE</i>				
8:30 a.m.-9:10 a.m.	Little, <i>@d.tech</i> , Green	8:30 a.m.-9:10 a.m.	Little, <i>@d.tech</i> (Open Session), Green	8:30 a.m.-9:10 a.m.	Little, <i>@d.tech</i> (Assembly), Green	8:30 a.m.-9:10 a.m.	Little, <i>@d.tech</i> , Green	8:30 a.m.-10:00 a.m.	Design Lab, Yellow
9:15 a.m.-10:05 a.m. (A)	Learning Hub, Turquoise	9:15 a.m.-10:05 a.m. (G)	Learning Hub, Green	9:15 a.m.-10:05 a.m. (K)	Learning Hub, Blue	9:15 a.m.-10:05 a.m. (O)	Learning Hub, Turquoise		
10:10 a.m.-11:00 a.m. (B)	Cerra, <i>English</i> , Yellow	10:15 a.m.-10:30 a.m.	<i>Physical Activity Break</i>	10:15 a.m.-10:30 a.m.	<i>Physical Activity Break</i>	10:10 a.m.-11:00 a.m. (P)	Cerra, <i>English</i> , Yellow	10:00 a.m.-10:15 a.m.	<i>Physical Activity Break</i>
11:00 a.m.-11:15 a.m.	<i>Physical Activity Break</i>	10:35 a.m.-11:35 a.m. (H)	Mitchell, <i>Geometry</i> , Orange	10:35 a.m.-11:35 a.m. (L)	Cerra, <i>English</i> , Yellow	11:00 a.m.-11:15 a.m.	<i>Physical Activity Break</i>	10:20 a.m.-12:00 p.m.	Little, <i>@d.tech</i> , Green
11:20 a.m.-12:10 p.m. (C)	Learning Hub, Blue	11:40 a.m.-12:40 p.m. (I)	Bolt, <i>Economics</i> , Blue	11:35 a.m.-12:10 p.m.	<i>Lunch</i>	11:20 a.m.-12:10 p.m. (Q)	Learning Hub, Blue	12:00 p.m.-12:30 p.m.	Meetings
12:15 p.m.-1:05 p.m. (D)	Bolt, <i>Economics</i> , Blue	12:40 p.m.-1:15 p.m.	<i>Lunch</i>	12:15 p.m.-1:15 p.m. (M)	Bolt, <i>Economics</i> , Blue	12:15 p.m.-1:05 p.m. (R)	Bolt, <i>Economics</i> , Blue		
1:05 p.m.-1:40 p.m.	<i>Lunch</i>	1:20 p.m.-2:20 p.m. (J)	Clark, <i>Physics</i> , Turquoise	1:20 p.m.-2:20 p.m. (N)	Learning Hub, Green	1:05 p.m.-1:40 p.m.	<i>Lunch</i>		
1:45 p.m.-1:50 p.m.	Design Lab Yellow, Attendance					1:45 p.m.-1:50 p.m.	Design Lab Yellow, Attendance		
1:50 p.m.-2:40 p.m. (E)	Clark, <i>Physics</i> , Turquoise	2:25 p.m.-3:35 p.m.	Design Lab, Yellow	2:25 p.m.-3:35 p.m.	Design Lab, Yellow	1:50 p.m.-2:40 p.m. (S)	Clark, <i>Physics</i> , Turquoise		
2:45 p.m.-3:35 p.m. (F)	Mitchell, <i>Geometry</i> , Orange					2:45 p.m.-3:35 p.m. (T)	Mitchell, <i>Geometry</i> , Orange		

Class Key: Teacher Last Name, *Class*, Room. Example: Cerra, *English*, Yellow.

Source: Design Tech High School<sup>24</sup>

<sup>24</sup> "Sample Student Schedule." Design Tech High School. [https://docs.google.com/a/dtechhs.org/spreadsheets/d/1dEV7mKdo82yc3g\\_u-B5hr9wpgzu6SruzShmRblHHRa/edit?usp=sharing](https://docs.google.com/a/dtechhs.org/spreadsheets/d/1dEV7mKdo82yc3g_u-B5hr9wpgzu6SruzShmRblHHRa/edit?usp=sharing)

In order to maintain this system, the school’s office manager works with teachers to coordinate these schedules. As the Hechinger Report notes, the school uses this system because they could not find ready-made computer systems that could accommodate their needs.<sup>25</sup>

### BROOKLYN GENERATION HIGH SCHOOL (NEW YORK, NY)

Among the public schools in this sample, Brooklyn Generation High School offers the most innovative and untraditional methods for scheduling courses. While New York State requires students to secure 22 credits for graduating high school and the school does not follow a traditional schedule of credit-bearing classes, Hanover Research selected this school since its schedule allowed it to lengthen the traditional school year from 180 to 200 days.<sup>26</sup>

#### FOUNDATION AND STUDIO COURSES

During most of the year, the school utilizes a daily schedule where students take two 85-minute “foundation” courses and three “studio” 60-minute elective or support courses that incorporate multiple subjects into one multidisciplinary class period. Students take the foundation courses—mathematics and humanities—in the morning, and the three studio courses—science, arts, and electives—in the afternoon. Teachers teach one studio and two foundation courses for a total of three hours and 50 minutes and participate in two hours of collaboration time during studio courses. Figure 1.9 shows this schedule.

**Figure 1.9: Brooklyn Generation High School Daily Schedule**

SCHEDULE	9:00 A.M.		Lunch	1:00 P.M.		4:00 P.M.	5:30 P.M.
Student Schedule	Foundation Course	Foundation Course		Studio Course	Studio Course	Studio Course	Extracurricular Activities (Optional for students and staff)
Teacher Schedule	Foundation Course	Foundation Course		Studio Course	Common planning time for every Foundation Course teaching team		
<b>Foundation Courses:</b> <ul style="list-style-type: none"> <li>▪ Are morning courses with 14 to 16 students per class that last 85 minutes.</li> <li>▪ Courses target five regents exams:                             <ul style="list-style-type: none"> <li>○ Integrated Algebra</li> <li>○ Global Studies</li> <li>○ American History</li> <li>○ Living Environment</li> <li>○ English</li> </ul> </li> </ul>			<b>Studio Courses:</b> <ul style="list-style-type: none"> <li>▪ Are afternoon classes with 24 to 28 students per class that last 60 minutes.</li> <li>▪ They include other required courses such as science, advanced math, and foreign languages.</li> <li>▪ They also include:                             <ul style="list-style-type: none"> <li>○ Electing and enrichment offerings</li> <li>○ Mandated services</li> <li>○ Data-informed remediation</li> </ul> </li> </ul>				

Source: National Center on Time and Learning<sup>27</sup>

<sup>25</sup> Dobo, “A School Where Students, Teachers Remix Their Schedules Every Week,” Op. cit.

<sup>26</sup> Individual State Profile – Standard High School Graduation Requirements (50 – State),” Op. cit.

<sup>27</sup> “Staggered Schedules: Cost -Effective Solution to Increased Learning Time Brooklyn Generation.” National Center on Time and Learning. p. 1.  
[http://www.timeandlearning.org/sites/default/files/resources/brooklyn\\_generation\\_staggered\\_scheduling.pdf](http://www.timeandlearning.org/sites/default/files/resources/brooklyn_generation_staggered_scheduling.pdf)

It should be noted that foundation courses may not be limited to one topic, but may include math, history, or English topics into one integrated course. While these courses appear to last all year, the studio courses are referenced as potentially shorter courses, allowing students to complete several credit-bearing courses throughout the year.

### *INTENSIVE COURSES*

Students at Brooklyn Generation High School also take credit-bearing courses called “intensives” as a part of their studies. These courses focus on developing a student’s interest in college and careers by giving them the opportunity to observe work in fields of interest, apply to colleges, or study non-traditional courses such as budgeting.<sup>28</sup> For these classes, the school works with external partners such as colleges, corporations, community organizations, and public agencies to provide additional resources for students.<sup>29</sup>

In contrast to the other two types of courses, which students take during most of the year, these courses intersect with a teacher’s vacations. During the year, teachers work 180 school days that align with three separate vacation periods incorporated into the academic year. In addition to a month-long break in August, teachers have two separate, grade-specific four week breaks that the school rotates throughout the year. During these breaks, teachers have three weeks of vacation and one week of team planning and professional development.<sup>30</sup>

Students participate in their intensive classes during these grade-specific breaks. In order to accommodate a regular teacher’s vacation schedule, “intensives teams” of certified teachers and guidance counselors rotate across different grade levels to teach these courses.<sup>31</sup> Figure 1.10 on the following page shows the schedule for teacher vacation and students’ special learning activities as they rotate through the academic year.

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<sup>28</sup> Wall, P. “Sensing Interest, Group Wants to Replicate Brooklyn School’s Unusual Schedule.” Chalkbeat New York, February 26, 2014. <http://ny.chalkbeat.org/2014/02/26/sensing-interest-group-wants-to-replicate-brooklyn-schools-unusual-schedule/#.VmHO4HarSUK>

<sup>29</sup> “Staggered Schedules,” Op. cit.

<sup>30</sup> Ibid., p. 2.

<sup>31</sup> Ibid., p. 1.



**Figure 1.10: Brooklyn Generation High School Calendar Year**

CALENDAR YEAR											
Sep	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug
Grade 12 Teachers		Grade 11 Teachers	Grade 10 Teachers	Grade 9 Teachers		Grade 10 Teachers	Grade 11 Teachers	Grade 9 Teachers	Grade 12 Teachers		All Teachers
DESCRIPTION OF INTENSIVE COURSES											
Grade 9			Grade 10			Grade 11			Grade 12		
<b>Private Sector Experience</b> Students explore the following fields: <ul style="list-style-type: none"> <li>Medicine and health</li> <li>Technology and engineering</li> <li>Media and Journalism</li> </ul>			<b>Nonprofit and Public Sector Experience</b> Students adopt a cause and engage in real life projects to generate change (e.g. Doctors without Boards, United Way).			<b>Campus Life and Internships</b> Students visit campuses, identify colleges of interest, participate in internships and community service projects.			<b>"I Am Ready"</b> Students complete college applications and receive "life readiness" training.		

Source: National Center on Time and Learning<sup>32</sup>

Across these schedules, teachers work together to create common instructional units and assessments to track student progress. These sessions allow teachers to identify a student’s areas of weakness, share teaching strategies, and make plans to reteach lessons. Teachers also encourage each other to experiment with different instructional approaches and replace outdated practices with more effective ones.<sup>33</sup>

*USE OF TEACHER TIME*

The school uses a small, multi-function staff to operate a 200 day year with a union contract that limits teachers from working more than 180 days. For example, teachers who work in core academic subjects teach elective or remedial classes, teach studio courses, and carry out administrative work. The teachers also take responsibilities typically assigned to deans, a position that the school does not use in its administrative structure.<sup>34</sup> These practices allow the school to extend the length of its school calendar without impacting the total number of days that teachers work each year.<sup>35</sup>

<sup>32</sup> Ibid.

<sup>33</sup> Sawchuk, S. "N.Y.C. School Built Around Unorthodox Use of Time." *Education Week*, March 9, 2010. [http://www.edweek.org/ew/articles/2010/03/10/24brooklyn\\_ep.h29.html](http://www.edweek.org/ew/articles/2010/03/10/24brooklyn_ep.h29.html)

<sup>34</sup> [1] Wall, "Sensing Interest, Group Wants to Replicate Brooklyn School’s Unusual Schedule," Op. cit. [2] "Sawchuk, S. "N.Y.C. School Built Around Unorthodox Use of Time," Op. cit.

<sup>35</sup> Wall, "Sensing Interest, Group Wants to Replicate Brooklyn School’s Unusual Schedule," Op. cit.

## SECTION II: PRIVATE HIGH SCHOOLS

The following section examines four private high schools that have adopted innovative approaches to incorporating more than 24 credit-bearing courses into their academic schedules. While some of these schools may not have 24 credit requirements, Hanover Research has included these schools since their schedules accommodate more than 24 credit-bearing courses. As with Section I, Hanover Research defines a credit-bearing course as an academic class that is at minimum 40 to 45 minute in length; these courses do not include advisory or tutoring sessions.

### **BULLIS SCHOOL (POTOMAC, MD)**

The Bullis School has a weekly schedule that accommodates seven credit-bearing courses, totaling to 28 credit-bearing courses during a student’s high school career. Hanover Research selected this school because it operates on an alternating two-week schedule that incorporates seven classes into a daily schedule with six periods, as well as room for club meetings, advisory sessions, and enrichment courses.

#### *THE CREATION OF THE SCHOOL SCHEDULE*

The school’s evolving curriculum led its administration to create a two week schedule for its middle and upper school students in the 2013-14 school year. In order to create the schedule, a task force of teachers, staff, and administrators examined schedules from local and national schools and met with other school administrators to understand the benefits and drawbacks of their schedules. The school also conducted a campus-wide survey to receive input from students as well as instructional, operational, and support staff.<sup>36</sup>

#### *ALTERNATING WEEKS IN THE SCHOOL SCHEDULE*

After the development process, the school created a schedule with a “Blue Week” and “Gold Week” that organizes classes across seven rotating class slots; the schedule also includes extra instruction and advisory courses. Figure 2.1 shows the school’s blue week schedule.

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<sup>36</sup> “Class Schedules.” Bullis School. <http://www.bullis.org/page.cfm?p=592>

**Figure 2.1: Bullis School Upper School Daily Schedule 2014-2015 (Blue Week)**

MONDAY		TUESDAY		WEDNESDAY		THURSDAY		FRIDAY	
A 8:00 a.m.-8:50 a.m.		B 8:00 a.m.-8:50 a.m.		E 8:00 a.m.-8:50 a.m.		C 8:00 a.m.-8:50 a.m.		G 8:00 a.m.-8:50 a.m.	
B 8:55 a.m.-10:05 a.m.		C 8:55 a.m.-10:05 a.m.		F 8:55 a.m.-10:05 a.m.		E 8:55 a.m.-10:05 a.m.		D 8:55 a.m.-10:05 a.m.	
All School Assembly 10:05 a.m.-10:40 a.m.		Snack 10:05 a.m.-10:15 a.m.		Snack 10:05 a.m.-10:15 a.m.		Snack 10:05 a.m.-10:15 a.m.		Snack 10:05 a.m.-10:15 a.m.	
Snack 10:40 a.m.-10:50 a.m.		Advisory 10:15 a.m.-10:40 a.m.		Class/Club Meeting 10:15 a.m.-10:40 a.m.		Upper School Assembly 10:15 a.m.-10:40 a.m.		Advisory 10:15 a.m.-10:40 a.m.	
C 10:55 a.m.-11:45 a.m.		D 10:45 a.m.-11:35 a.m.		G 10:45 a.m.-11:35 a.m.		F 10:45 a.m.-11:35 a.m.		E 10:45 a.m.-11:35 a.m.	
Lunch/A 11:45 a.m.-12:15 p.m.	D/A 11:50 a.m.-12:40 p.m.	Lunch/A 11:45 a.m.-12:15 p.m.	G/A 11:50 a.m.-12:40 p.m.	Lunch/A 11:45 a.m.-12:15 p.m.	B/A 11:50 a.m.-12:40 p.m.	Lunch/A 11:45 a.m.-12:15 p.m.	A/A 11:50 a.m.-12:40 p.m.	Lunch/A 11:45 a.m.-12:15 p.m.	F/A 11:50 a.m.-12:40 p.m.
D/B 12:15 p.m.-1:05 p.m.	Lunch/B 12:40 p.m.-1:10 p.m.	G/B 12:15 p.m.-1:05 p.m.	Lunch/B 12:40 p.m.-1:10 p.m.	B/B 12:15 p.m.-1:05 p.m.	Lunch/B 12:40 p.m.-1:10 p.m.	A/B 12:15 p.m.-1:05 p.m.	Lunch/B 12:40 p.m.-1:10 p.m.	F/B 12:15 p.m.-1:05 p.m.	Lunch/B 12:40 p.m.-1:10 p.m.
				Break 1:00 p.m.-1:10 p.m.				Break 1:00 p.m.-1:10 p.m.	
E 1:10 p.m.-2:00 p.m.		A 1:20 p.m.-2:10 p.m.		D 1:10 p.m.-2:00 p.m.		Enrichment 1:20 p.m.-2:00 p.m.		C 1:10 p.m.-2:00 p.m.	
F 2:05 p.m.-2:55 p.m.		After School Activities/Enrichment 2:15 p.m.-2:55 p.m.		A 2:05 p.m.-2:55 p.m.		G 2:05 p.m.-2:55 p.m.		B 2:05 p.m.-2:55 p.m.	
Extra Instruction 2:55 p.m.-3:20 p.m.		Extra Instruction 2:55 p.m.-3:20 p.m.		Extra Instruction 2:55 p.m.-3:20 p.m.		Extra Instruction 2:55 p.m.-3:20 p.m.		Extra Instruction 2:55 p.m.-3:20 p.m.	

Source: Bullis School<sup>37</sup>

The Gold Week switches most of the classes in the first, second, fourth, seventh, and ninth slots while maintaining the same extra instruction and advisory sessions from the Blue week. Figure 2.2 on the following page shows the Gold Week schedule.

<sup>37</sup> "Bullis School Upper School Daily Schedule 2014-2015 (Blue Week)." Bullis School, May 19, 2014. [http://www.bullis.org/uploaded/PDFs/Academics/Class\\_Schedules/US\\_Daily\\_With\\_Color\\_Wk\\_1\\_\(R11.22\).pdf](http://www.bullis.org/uploaded/PDFs/Academics/Class_Schedules/US_Daily_With_Color_Wk_1_(R11.22).pdf)

**Figure 2.2: Bullis School Upper School Daily Schedule 2014-2015 (Gold Week)**

MONDAY		TUESDAY		WEDNESDAY		THURSDAY		FRIDAY	
A 8:00 a.m.-8:50 a.m.		C 8:00 a.m.-8:50 a.m.		G 8:00 a.m.-8:50 a.m.		E 8:00 a.m.-8:50 a.m.		G 8:00 a.m.-8:50 a.m.	
C 8:55 a.m.-10:05 a.m.		B 8:55 a.m.-10:05 a.m.		E 8:55 a.m.-10:05 a.m.		F 8:55 a.m.-10:05 a.m.		D 8:55 a.m.-10:05 a.m.	
All School Assembly 10:05 a.m.-10:40 a.m.		Snack 10:05 a.m.-10:15 a.m.		Snack 10:05 a.m.-10:15 a.m.		Snack 10:05 a.m.-10:15 a.m.		Snack 10:05 a.m.-10:15 a.m.	
Snack 10:40 a.m.-10:50 a.m.		Advisory 10:15 a.m.-10:40 a.m.		Class/Club Meeting 10:15 a.m.-10:40 a.m.		Upper School Assembly 10:15 a.m.-10:40 a.m.		Advisory 10:15 a.m.-10:40 a.m.	
B 10:55 a.m.-11:45 a.m.		D 10:45 a.m.-11:35 a.m.		A 10:45 a.m.-11:35 a.m.		C 10:45 a.m.-11:35 a.m.		E 10:45 a.m.-11:35 a.m.	
Lunch/A 11:45 a.m.-12:15 p.m.	D/A 11:50 a.m.-12:40 p.m.	Lunch/A 11:45 a.m.-12:15 p.m.	G/A 11:50 a.m.-12:40 p.m.	Lunch/A 11:45 a.m.-12:15 p.m.	B/A 11:50 a.m.-12:40 p.m.	Lunch/A 11:45 a.m.-12:15 p.m.	A/A 11:50 a.m.-12:40 p.m.	Lunch/A 11:45 a.m.-12:15 p.m.	F/A 11:50 a.m.-12:40 p.m.
D/B 12:15 p.m.-1:05 p.m.	Lunch/B 12:40 p.m.-1:10 p.m.	G/B 12:15 p.m.-1:05 p.m.	Lunch/B 12:40 p.m.-1:10 p.m.	B/B 12:15 p.m.-1:05 p.m.	Lunch/B 12:40 p.m.-1:10 p.m.	A/B 12:15 p.m.-1:05 p.m.	Lunch/B 12:40 p.m.-1:10 p.m.	F/B 12:15 p.m.-1:05 p.m.	Lunch/B 12:40 p.m.-1:10 p.m.
				Break 1:00 p.m.-1:10 p.m.				Break 1:00 p.m.-1:10 p.m.	
F 1:10 p.m.-2:00 p.m.		A 1:20 p.m.-2:10 p.m.		D 1:10 p.m.-2:00 p.m.		Enrichment 1:20 p.m.-2:00 p.m.		C 1:10 p.m.-2:00 p.m.	
E 2:05 p.m.-2:55 p.m.		After School Activities/Enrichment 2:15 p.m.-2:55 p.m.		F 2:05 p.m.-2:55 p.m.		G 2:05 p.m.-2:55 p.m.		B 2:05 p.m.-2:55 p.m.	
Extra Instruction 2:55 p.m.-3:20 p.m.		Extra Instruction 2:55 p.m.-3:20 p.m.		Extra Instruction 2:55 p.m.-3:20 p.m.		Extra Instruction 2:55 p.m.-3:20 p.m.		Extra Instruction 2:55 p.m.-3:20 p.m.	

Source: Bullis School<sup>38</sup>

According to the school, this schedule’s benefits include promoting student engagement and efficiency of instruction. The longer 70-minute block periods also allow teachers to focus on in-depth, cross-discipline project based learning.<sup>39</sup>

### CATLIN GABEL SCHOOL (PORTLAND, OR)

Catlin Gabel School has a weekly schedule that accommodates seven credit-bearing courses, totaling to 28 credit-bearing courses during a student’s high school career. Hanover Research selected this school because it uses a modified five block schedule where teachers

<sup>38</sup> “Bullis School Upper School Daily Schedule 2014-2015 (Gold Week).” Bullis School, May 19, 2014. [http://www.bullis.org/uploaded/PDFs/Academics/Class\\_Schedules/US\\_Daily\\_With\\_Color\\_Wk\\_2\\_\(R11.22\).pdf](http://www.bullis.org/uploaded/PDFs/Academics/Class_Schedules/US_Daily_With_Color_Wk_2_(R11.22).pdf)

<sup>39</sup> “Class Schedules,” Op. cit.

can use “Flex Time” adjacent to 45-minute courses to extend their course duration to 75 minutes.

*OVERVIEW OF THE SCHOOL SCHEDULE*

As Figure 2.3 shows, the school operates on a seven day cycle with courses labeled A through G. In each day, the school has one 75-minute period, two 45-minute periods, three 45-minute periods with adjacent 30 Flex Time periods, and one 35-minute co-curricular period. The class blocks rotate equally across morning and afternoon slots. Teachers can decide to add a Flex Time period to extend 45-minute classes to 75 minutes.<sup>40</sup>

**Figure 2.3: Catlin Gabel Upper School Schedule**

PERIOD	A	B	C	D	E	F	G
Period 1 8:00 a.m.- 8:45 a.m.	Block 1	Block 6	Block 4	Block 2	Block 7	Block 5	Block 3
Early Flex 8:45 a.m.- 9:15 a.m.	Early Flex	Early Flex	Early Flex	Early Flex	Early Flex	Early Flex	Early Flex
9:20 a.m.- 9:40 a.m.	C&C/Break	C&C/Break	C&C/Break	C&C/Break	C&C/Break	C&C/Break	C&C/Break
Period 2 9:45 a.m.- 10:30 a.m.	Block 2	Block 7	Block 5	Block 3	Block 1	Block 6	Block 4
Period 3 10:35 a.m.- 11:20 a.m.	Block 3	Block 1	Block 6	Block 4	Block 2	Block 7	Block 5
AM Flex 11:20 a.m.- 11:50 a.m.	AM Flex	AM Flex	Assembly 11:25 a.m.- 12:25 p.m.	AM Flex	AM Flex	AM Flex	AM Flex
11:55 a.m.- 12:30 p.m.	Co- Curricular	Co- Curricular		Co- Curricular	Co- Curricular	Co- Curricular	Co- Curricular
12:30 p.m.- 1:05 p.m.	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch
PM Flex 1:10 p.m.- 1:40	PM Flex	PM Flex	PM Flex	PM Flex	PM Flex	PM Flex	PM Flex
Period 4 1:40 p.m.- 2:25 p.m.	Block 4	Block 2	Block 7	Block 5	Block 3	Block 1	Block 6
Period 5 2:30 p.m.- 3:15 p.m.	Block 5	Block 3	Block 1	Block 6	Block 4	Block 2	Block 7

Source: Catlin Gabel School<sup>41</sup>

<sup>40</sup> “Upper School Schedule.” Catlin Gabel School. <http://www.catlin.edu/page.cfm?p=619>

<sup>41</sup> “Catlin Gabel Upper School Daily Schedule.” Catlin Gabel School. [http://www.catlin.edu/uploaded/ACADEMICS\\_MORE/Upper\\_School/Photos/US\\_Schedule\\_2013-2014.jpg](http://www.catlin.edu/uploaded/ACADEMICS_MORE/Upper_School/Photos/US_Schedule_2013-2014.jpg)

## OVERLAKE SCHOOL (REDMOND, WA)

The Overlake School has a weekly schedule that accommodates seven credit-bearing courses, totaling to 28 credit-bearing courses during a student’s high school career. Hanover Research selected this school since it follows a six-period schedule with fewer breaks that accommodate three large blocks for three out of the eight class cycle.

### OVERVIEW OF THE SCHOOL SCHEDULE

As Figure 2.4 shows, the school’s schedule works on a continuous rotation of eight days with labels A through H. On days B, C, and D, the school extends the class periods for six of the seven courses; the school extends the length of the seventh course on Day E. The school has only one assembly period and two breaks for club and activities during the day. The school also has a “Zero Block” at the beginning of the day; this appears as “0” in the table.<sup>42</sup>

**Figure 2.4: Overlake School Upper School Schedule 2015-2016**

	DAY A	DAY B	DAY C	DAY D	DAY E	DAY F	DAY G	DAY H
7:20 a.m.-8:05 a.m.	0	0	0	0	0	0	0	0
8:10 a.m.-9:00 a.m.	A	G	E	C	B	F	D	C
9:00 a.m.-9:35 a.m.	Homeroom Break	Homeroom Break	Homeroom Break	Homeroom Break	Homeroom Break	Homeroom Break	Homeroom Break	Homeroom Break
9:35 a.m.-10:25 a.m.	B	A 9:35 a.m.-10:50 a.m.	F 9:35 a.m.-10:50 a.m.	D 9:35 a.m.-10:50 a.m.	Community 9:35 a.m.-9:55 a.m.	Club/ Activity	E	Club/ Activity
					C 10:00 a.m.-11:20 a.m.			
10:30 a.m.-11:20 a.m.	C	B 11:00 a.m.-12:15 p.m.	G 11:00 a.m.-12:15 p.m.	E 11:00 a.m.-12:15 p.m.		A	G	E
11:25 a.m.-12:15 p.m.	D				A			
12:15 p.m.-1:00 p.m.	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch
1:00 p.m.-1:50 p.m.	E	C	A	G	D	B	B	F
1:55 p.m.-2:45 p.m.	F	D	B	F	E	C	A	G
2:45 p.m.-3:10 p.m.	Office Hours	Office Hours	Office Hours	Office Hours	Office Hours	Office Hours	Office Hours	Office Hours

Source: Overlake School<sup>43</sup>

<sup>42</sup> “Schedule for Seven Period Day.” Overlake School.  
<https://www.overlake.org/sites/default/files/documents/schedules/SevenPeriodDay.pdf>

<sup>43</sup> “Upper School Schedule – 2015-2016.” Overlake School.  
<https://www.overlake.org/sites/default/files/documents/schedules/US2016.pdf>

## **MADEIRA SCHOOL (MCLEAN, VA)**

Madeira School, an all-girls school, uses a modified four block rotational schedule with a module system that divides the school year into seven five-week terms. While this school does not adhere to any traditional definition of credit-bearing courses—a class length may vary in length across modules—it serves as an innovative model for the manner that schools can use to shorten or lengthen the duration of instructional periods over the course of the year.

### *OVERVIEW OF THE SCHOOL SCHEDULE*

The school's schedule is based on modules, which divide the academic year into seven periods of time that last approximately five weeks. Within these modules, a student's day is divided into four blocks. The first three blocks—A, B, and C—consist of 80-minute academic courses. Over the course of the year, a student will take these courses in three modules, which is the approximate length of one semester. Students may take these courses in back-to-back modules or modules distributed over the year

In addition to these courses, Block D is a 90-minute period for non-academic courses such as competitive sports, riding, or art. Each day also include open blocks that allow students to participate in extracurricular activities such as club meetings, fitness, counseling, Community Meeting Time (CMT), and class meetings. Finally, the schedule also has breaks that allow students to participate in student-driven activities, private music lessons, college counseling meetings, and outside tutoring.

### *GRADE 9 AND GRADE 10 SCHEDULES*

The school uses two sets of schedules for its students: one for Grade 9 and Grade 10 students and another for Grade 11 and Grade 12 students. The differences between both schedules stem from school policies that require students to intern with an outside organization during their last two years, while younger students focus on academic coursework. Figure 2.5 on the following page shows a sample schedule for Grade 9 students.

**Figure 2.5: Sample Grade 9 Year Schedule**

MODULE 1	MODULE 2	MODULE 3	MODULE 4	MODULE 5	MODULE 6	MODULE 7
Breakfast						
English	Biology	Student Life I	Biology	English	Student Life I	English
Open Block						
Biology	Global Civilizations	Global Civilizations	French I	Fundamentals of Design	French I	French I
Lunch/Advisory						
Algebra I	Algebra I	Elective	Algebra I	Global Civilizations	Fundamentals of Design	Fundamentals of Design
Open Block						
Soccer	Soccer	Musical	Musical	Musical	Track and Field	Track and Field

Source: Madeira School<sup>44</sup>

A Grade 9 student must earn 12 trimesters of activity credit, eight of which must be athletic or activity credits. Eligible activities include chamber orchestras or A Capella groups.<sup>45</sup> Figure 2.6 shows the sample schedule for Grade 10 students, who take advanced level classes using the same schedule as Grade 9 students.

**Figure 2.6: Sample Grade 10 Year Schedule**

MODULE 1	MODULE 2	MODULE 3	MODULE 4	MODULE 5	MODULE 6	MODULE 7
Breakfast						
English II	Student Life II	Physics with Geometry	Physics with Geometry	English II	Modern World History	English II
Open Block						
Physics with Geometry	Co-Curriculum	Spanish II	Modern World History	Spanish II	Spanish II	Modern World History
Lunch/Advisory						
Geometry	Co-Curriculum	Geometry	Ceramics	Geometry	Glee	Performing Arts
Open Block						
Play	Play	Dance	Karate	Dance	Karate	Dance

Source: Madeira School<sup>46</sup>

During this year, the school encourages students to work with area schools, various non-profits, and local governmental agencies that serve disadvantaged populations across the Washington, DC area.<sup>47</sup>

**GRADE 11 AND GRADE 12 STUDENT SCHEDULES**

The school allows Grade 11 and Grade 12 students to intern in the Washington, DC area during their academic year. As Figure 2.7 shows, Grade 11 students intern in Module 5.

<sup>44</sup> "About the Modular Schedule." Madeira School. <http://www.madeira.org/academics/modular-schedule/>

<sup>45</sup> "What to Expect Grade 9 Year." Madeira School. <http://www.madeira.org/academics/grades-9-12-what-to-expect-eac/grade-9/>

<sup>46</sup> "About the Modular Schedule," Op. cit.

<sup>47</sup> "Sophomore Co-Curriculum." Madeira School. <http://www.madeira.org/academics/grades-9-12-what-to-expect-eac/grade-10/sophomore-co-curriculum/>



**Figure 2.7: Sample Grade 11 Year Schedule**

MODULE 1	MODULE 2	MODULE 3	MODULE 4	MODULE 5	MODULE 6	MODULE 7	
Breakfast							
English III	English III	Chemistry	Chemistry	Internship	Student Life III	English III	
Open Block					Open Block		
Chemistry	U.S. History	U.S. History	Algebra II/Trig-C		Chinese III	Chinese III	
Lunch/Advisory							
Algebra II/Trig-A	Chinese III	Algebra II/Trig-B	Tech Theatre		U.S. History	Photography	
Open Block					Open Block		
Field Hockey	Field Hockey	Riding	Pilates		Tennis	Tennis	

Source: Madeira School<sup>48</sup>

During this module, Grade 11 year students intern in a congressional office, lobbying organization, government agency, or government sub-committee as a part of the year’s focus on government and policy courses.<sup>49</sup>

During her last year, a student will intern during Module 3, as demonstrated in Figure 2.8.

**Figure 2.8: Sample Grade 12 Year Schedule**

MODULE 1	MODULE 2	MODULE 3	MODULE 4	MODULE 5	MODULE 6	MODULE 7	
Breakfast							
AP Physics	AP Physics	Internship	AP Physics	AP U.S. Government	AP U.S. Government	English IV	
Open Block			Open Block				
Student Life IV	English IV		Latin IV	Latin IV	AP Physics	Latin IV	
Lunch/Advisory							
AP Calculus	AP Calculus		AP Calculus	AP Calculus	English IV	Genocide	
Open Block				Open Block			
Dance	Dance		Riding	Riding	Softball	Softball	

Source: Madeira School<sup>50</sup>

Grade 12 year internships give students the opportunity to participate in work that addresses their professional interests. These organizations include C-SPAN, Children’s Law Center, National Geographic, the National Institutes of Health (NIH), the Smithsonian Institute, the U.S. Department of State, and the Washington National Opera.<sup>51</sup>

<sup>48</sup> “About the Modular Schedule,” Op. cit.

<sup>49</sup> “Junior Co-Curriculum.” Madeira School. <http://www.madeira.org/academics/grades-9-12-what-to-expect-eac/grade-11/junior-co-curriculum/>

<sup>50</sup> “About the Modular Schedule,” Op. cit.

<sup>51</sup> “Senior Co-Curriculum: Leadership.” Madeira School. <http://www.madeira.org/academics/grades-9-12-what-to-expect-eac/grade-12/senior-co-curriculum/>

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