

HOW MUCH ORCHESTRATION CAN YOU REALLY TEACH IN ONE SEMESTER?



A CONSIDERATION

Peter Lawrence Alexander

Author, The Professional Orchestration Series, How Ravel Orchestrated: Mother Goose Suite

How Much Orchestration Can You *Really* Teach in Just One Semester?

Peter Alexander, a composition degree graduate of the Berklee College of Music ('75) is the author of the Professional Orchestration Series, How Ravel Orchestrated: Mother Goose Suite, Applied Professional Harmony Series, Counterpoint by Fux, and How MIDI Works.

I write this White Paper as a product of the university system who, after graduation, decided to go to the “big city” (Los Angeles) and make it, and discovered, to use an aerospace term, that I was way behind the power curve and had a lot of catching up to do.

This wasn't just my experience, either. I arrived around the same time as a lot of other talented composers who came from major music schools, minor music schools, and local four year state schools, who like myself, also had only had one semester of orchestration.

You could divide us into two groups. The smallest subset knew Finale very well and often did copying for major composers or copy houses, where they learned orchestration through the ancient art of copying someone else's score.

The second group, of which I was a part, sought out mentors. Many of us found Dr. Albert Harris (a noted orchestrator, and the composer of a work for Andres Segovia that was nominated for a Pulitzer Prize) and Jack Smalley, who now teaches Film Composition at the University of Southern California.

I was fortunate to study with both. I also worked with Henry Mancini for three years and understudied on the scoring stage for three years with Jerry Goldsmith, most often remembered for his scores for the *Star Trek* movies and TV themes, the original *Planet of the Apes*, and 300 others.

Both Hank and Jerry had been mentored by the same two teachers after World War II, Mario Castelnuovo-Tedesco and Ernst Krenek.

When you're working with two of the top film composers of the 20th Century, you learn best by keeping your mouth shut and doing a lot of listening. With Hank, I got to ask exactly two questions and I got one score from him. With Jerry, I got to ask exactly zero questions (as in 0), but I came home from various movies with stacks of cues with the assumption that I would go through them and learn without having to ask and bug him. I did, and I still do!

But this was a multi-year process, and not just for me. Every so often you'd find someone who'd put your nose in a direction. The one first I credit for that is a man known by those only in Hollywood, Herb Spenser who orchestrated for John Williams. I had exactly one conversation with Herb, and that was right after *Raiders of the Lost Ark* was released. And that conversation ultimately lead me to create the *Professional Orchestration*[™] series of texts. In that one conversation, he said, “Peter, if you want to be successful, you have to know about a thousand devices.” Once I grasped this, my real orchestration studies began, and continue, because there's always something to learn.

This brings us back to this White Paper's question, “How much orchestration can you really teach in one semester?”

To answer this question, I started out with my experience along with that of other friends of mine who routinely orchestrate and arrange in Los Angeles.

Next, I examined nearly two-dozen orchestration syllabi to see what was being taught in colleges today.

Finally, I looked at the ever-changing industry demands and compared them to what I saw is being taught in today's colleges.

The Situation in Colleges Today

I see three issues.

Across the USA and in other countries, orchestration is only taught as a one semester, two credit-hour class, the majority of the time, in the senior year, with a few schools offering a string writing class in the Senior semester.

If we put our cards on the table, then we have to acknowledge that nearly 95% or more of all students in an orchestration class will never hear their required final project performed by live symphony orchestra, even a student one.

Excluding some experience with Finale or Sibelius, the majority of students will graduate with no exposure to or experience with electronic scoring (sequencing and recording) with such programs on the PC as Cubase or Sonar, or Apple Logic and Digital Performer on the Mac.

Defining Time

A military drill instructor has six-weeks with recruits running a 20-hour day, 7-days a week. This works out to be about 840 hours of training time.

By comparison, a college orchestration teacher has an average of 24 class hours, or 1/35 of the time a military drill instructor has with his trainees.

What's Typically Covered in 24 Hours

When I examined the various syllabi, I saw a fairly consistent pattern of x class meetings on the strings, x meetings on the woodwinds, x meetings on the brass and percussion, then various writing assignments, including some transcription work, culminating in the final project which is a full orchestration. Within this, some teachers required their students to turn their projects in using Finale or Sibelius. Only a few required attendance at various school or neighboring school concert events.

Because of the consistent pattern of instruction, it looks to me that this is probably the work plan from a workbook.

Defining What's Really Being Taught

Having not sat in the classroom for over (gulp!) thirty years for an orchestration course, I have the advantage of time and distance to coldly look at what's really being taught. When we look at the books labeled "orchestration" (and I'm including Volume 1 of my own series *Professional Orchestration* in this overview), I have to be brutally frank and state that *none* of these books are teaching orchestration.

What they are teaching is *instrumentation*.

Consequently, as I see it, what's really being taught is instrumentation with, to use a football term, a hurry-up offense to include some orchestration, too.

In observing this, I'm not criticizing. But what's apparent to me is that given the amount the student has to do in one semester, it's pretty clear that while it's unspoken, just about every instructor knows that one semester isn't enough.

Having said that, let's "get real" and acknowledge that a minimum of two semesters of instruction is really needed. The first semester covers instrumentation, with the second covering orchestration, which is learning some of those 1000 devices Herb Spencer told me I needed to learn.

But even with this acknowledgment, we still must answer the original question, "How much orchestration can you really teach in just one semester?"

The honest answer is, "A fair amount," provided you alter the teaching model.

So let's see what we can teach that will have significant impact on a student's career outside academia.

What First Must Be Taught

I think you're going to be surprised at my answer.

First and foremost, with approximately 24 hours of class time, a student *must* be taught how to teach himself. This is *the* key success tool. To teach himself, the student needs to be able to do some basic conducting, score read, and most importantly, score analysis. These are the key tools to success. Ranges, bowings, and fingerings can be looked up. That's memorization. Learning to score read and do score reductions are skills that can be graded.

Every volume in our *Professional Orchestration*TM series is built around full page/full score examples on an oversized 8.5 x 11 page. So as the student works his way through the major orchestral instruments, he has a minimum of four score excerpts to reduce per instrument, where the four excerpts cover the low, medium, high and very high range of the instrument. In the back of *Professional Orchestration Volume 1*, there's also a list of the most common combinations used in orchestral scoring. So with highlighter in hand, the student can mark the book to see which of the *8 Keys to Learning Professional Orchestration* are used in a specific excerpt. With this approach, the student is now learning instrumentation, orchestration *and* compositional techniques.

The Second Thing That Must Be Taught

Two words: critical listening. This is the next most important success skill. In talking with orchestration teachers across the country, looking at my experience and that of my colleagues in Los Angeles, many students matriculate to music school knowing the literature of the music they like, but most often, not much orchestral music. That was me, too. When I got to L.A., I knew most of the Woody Herman book backwards and forwards. Same with Stan Kenton. But when it came to orchestral, which is what I needed to know, I was abysmally behind the power curve. And so were most of my colleagues. So there began this mad dash to listen and learn.

And listening takes time.

So when I got to Los Angeles, while working for my big break, I drove around doing sales calls for the local PBS station magazine, and turned my Ford Escort with its cassette player into a learning center. Stuck in traffic, you can do a lot of quality listening! And to fully grasp a piece, you have to listen to it over and over and over again until you've internalized the score.

How do you give the student this concert experience?

One way is to require listening where the school uses one of several services with streaming audio. These are amazing resources. The problem that teachers encounter, which is the same problem I encountered running an experimental online orchestration class, is that students are mobile, including adult students. Whatever is happening in society, students are coming into orchestration thinking that sitting and qualitatively listening is time wasted.

Yet, no listening, no growth!

The way I worked around this problem was by working with eClassical.com who created two DRM-free MP3 packages for Volume 1. The first package, with over 10 hours of music, covers a majority of the examples in Volume 1 with this twist. Rather than give the student a “snippet” running a few seconds, with the MP3s, the student gets the entire movement the excerpt is found in. The second package is called the Concert Package. Supporting our *Professional Mentor* workbook, the student gets 20-minute (average time) concerts for each major orchestral instrument including harp and percussion. This exposes the student to a range of composers literally from Bach to Xenakis.

The MP3 idea is really very practical since with eClassical.com, the MP3s, which don't have digital rights management software on them, can be played on any MP3 player, including a cell phone. With this portability, the student has no excuse for not listening.

In teaching this online class, once we got the students listening, they were hooked. Many had no idea of how wide the sea of musical styles really is.

I should explain why I took this audio approach versus the traditional learning orchestration by “snippets” as appealing as snippets appear to be. My experience in the field is that snippets are dangerous because you learn a technique isolated from the context of the work. I “discovered” this by comparing my experience from using the recordings in Hank's book (*Sound and Scores*) and Dick Grove's *Arranging Concepts* (a jazz arranging method) to having marked the scores in Bizet's *Carmen Suites* with its numerous orchestral devices and focusing my listening on the whole work.

Do you remember as a kid working with connecting the dots where you draw lines to numbers to create a picture? Well, as I've learned the hard way in my career, snippets are like isolated dots but with no whole to connect to. And while it is more time consuming waiting for the excerpt, the end result is broadened conception and an understanding of how the excerpt fits into the whole piece.

Before committing investment funds to this idea, I had already practiced on myself years earlier by going through and marking all the major orchestral devices in Bizet's *Carmen* and *L'Arlesienne Suites* (to name two of many studied scores).

My confidence in this approach was really boosted one day at the old Warner Brothers scoring stage in Burbank, California during one of Hank's full orchestral sessions. During several cues, I just bent forward, head down, eyes closed, not looking at the score, listening to see how many of the devices I could identify. When I checked the score at the conclusion of each cue, my focused listening had enabled me to identify 90% of what was happening in the score.

This experience affirmed for me that orchestration is an ear training experience. When you can hear it, you can write for it. And when you can write for it, a lot of fear is eliminated, because you're not sitting there shaking in your shoes wondering if what you put on the stands is really going to sound the way you hoped it would.

There's yet another reason for this approach and that's the whole use of electronic sample libraries used in scoring today. You have to know what instruments sound like, and, what they don't sound like. If a student hasn't begun learning that, sample libraries can make the most competent composer look incompetent.

That's because not all of those creating libraries are really knowledgeable about orchestration and composition. As a result, for example, one company's sampled violins sound realistic in the low register while another library recorded in the same register reminds you of a sax!

Thus, knowing what instruments sound like and don't sound like enables the student to more adequately evaluate a sampled library to know what it can and can't do, and whether or not it should be bought.

This is where our teaching approach in *Professional Orchestration* with eClassical.com goes a long way to solving that problem. Here, the student learns not only what each instrument sounds like in the low, medium, high, and very high ranges, but also hundreds of combinations of instruments.

Armed with these aural insights, purchasing decisions, which affect the student's long term career, are much easier to make.

The Third Thing That Must Be Taught

This almost sounds like a no-brainer, but from all the syllabi I've read, what's not being taught is how to write for each instrument. If you accept my proposal that all the primary books are really about instrumentation, then you'll appreciate why our *Professional Mentor*TM workbook/syllabus covers song forms, basics of setting up a score, and then has weekly assignments where the student is required to write, and hopefully record depending on your school's resources, a 2-minute piece of music per week for solo instrument either with or without accompaniment. This requirement has a specific benefit for the student: upon graduation, the student has at least 10 publishable compositions ready for performance. If the student can get them recorded, the reward is a demo CD.

If the student only has the orchestral player that comes with *Finale* or *Sibelius*, then the student has at least something to demonstrate the caliber of their work, which is far better than having nothing.

The two minute length is an intentional choice because the standard of professional writing in Hollywood is two-minutes of fully scored orchestral music per day.

With an average of 24 class hours, a student cannot write for every single orchestral instrument! But the student can write for flute, oboe, clarinet, bassoon, French horn, trumpet, trombone, tuba, harp, violin, viola, cello and bass.

Again, to aid the student, we've set up a complete library of solo works for each of the above listed instruments with our Concert Package created by eClassical.com. This way, the student has audio resources to support his work.

The next step is to emulate in class what Ravel had with *Les Apache* in Paris. Bring in a musician to sight read the music to critique the playability, and then teach the group how to support and constructively critique each other's work.

From such an approach, the student should learn this lesson, that one class can't teach it all and that there's a proactive need on the student's part to consult with players to insure that what's been written is indeed playable.

When parts are put on the stands, the student must have all articulations put in. If a student put a piece on a stand and it had neither articulation nor tempo indications, I would give it an immediate F. That sounds amazingly harsh, but time is money, and that lesson needs to be learned early. If the parts aren't properly marked, then precious rehearsal time is wasted. Better to learn that in class than in the concert hall or the recording studio.

The other important consideration is that if the student didn't bother to put in the proper articulations, do they really know what they want?

More importantly, do they really care?

The Final Class Project. In all practicality, I think the final piece should be a short original work written for whatever instruments the school has available. If that's ten players, so be it. But the experience of writing a realistic piece of music that's actually performed (and conducted by the student) is much better than writing a full orchestral work that will be never be performed.

These three steps are the core instructional basis of *Professional Orchestration Volume 1*. And these core steps aren't theoretical, either. We've moved our experimental class over to being a series of online classes broken down by strings, brass, and woodwinds. Here, as required in the *Professional Mentor*, the student must submit a composition, not weekly, but every 10 days, which is then performed and critiqued by the instructor. This can be challenging with distance ed, which is what our classes are. But our early tests are showing that students are rising to the occasion and finishing their work. Not always on time, but finishing.

Needed: The Right Resources

Again, looking back over the past 30 years, I feel strongly about a few additional works being required by the student so that post graduation, the student has a basic working reference library to turn to. The first book is conductor Norman Del Mar's *Anatomy of the Orchestra* which gives the kind of live performance insights that just can't be covered in a single semester orchestration class. Second is Gardner Read's *Notation*, which is indispensable for both "hand" copying and computer work. Third, at least within the music library there should be a reference copy of Clinton Roemer's *The Art of Music Copying* that is badly needed for pop and jazz, especially for knowing the "correct" way to notate chords and chord symbols.

And not to sound crabby, but notation software programs don't always get it right. So the student needs back-up references to support their work.

A fourth book, available from Dover, is Forsyth's *Orchestration*. Also an instrumentation book, it has background on a number of instruments, some of which might not be used much today, but in electronic scoring are being sampled (for example, the basset horn!).

If you're happy with your present textbook selections, I strongly encourage you to examine *Professional Orchestration Volume 2A, Orchestrating the Melody Within the String Section*. An optional audio package and *Professional Mentor* are available for this volume.

Needed: Selected Scores

One of the great weaknesses of young writers entering professional life is that they seriously lack a study score library. We could debate for days what are the "right" scores to require, but I have a few practical suggestions that I think worthwhile.

Mozart Symphony #39 (or above) – From a practical scoring perspective, to study a Mozart score, even just one, is to learn how to make a small string ensemble sound big. Pay attention to Mozart’s use of unison, octaves, thirds and sixths. Dover Publications.

Raider’s Of the Lost Ark Theme by John Williams – Here’s the writing problem this work helps solve: how to score for large orchestra with a “concert” (vs. pop) sound a song that’s largely AABA in form. It’s also a good study to compare concert brass vs. jazz brass writing. My second choice would be the *Phantom Menace* score (\$27 more) that covers the same ground and includes vocals. My third choice is Mr. Williams’ *Harry Potter and The Sorcerer’s Stone Expanded Edition: Children’s Suite For Orchestra* that features bonus brass and woodwind choir arrangements (\$60).

Fantasia on a Theme by Thomas Tallis and Other Works for Orchestra in Full Score by Ralph Vaughan Williams – This compilation includes string orchestra writing and *Fantasia on Christmas Carols* that also gets into vocal writing. Dover Publications.

How Ravel Orchestrated: Mother Goose Suite - Tasteless as it may be, I recommend one of my works here. What I like about this work for student study is that it has good themes, jazz harmony that’s relatively easy to analyze, and a practical application of counterpoint which helps the student learn how to apply in full work that which the student has learned in other classes. It’s also a good work to study for learning dramatic composition.

Symphony #1 (The Titan) and Songs of a Wayfarer by Gustav Mahler. What I like about this combination is that the same melody is used in both. This gives the student the opportunity to compare the instrumental to the vocal version.

You Can’t Do It All In One Semester

What this short list of scores emphasizes is what’s needed to be learned compared to how much time you have to teach it. And this score list can easily be expanded to include Copland (*Appalachian Spring, Billy the Kid, Quiet City, The Red Pony Suite*), DeFalla (*Three-Cornered Hat Ballet, Nights in the Garden of Spain*), Bizet (*Carmen Suites, L’Arlesienne Suites*), and *The Planets* by Holst.

In 24 - 30 class hours, you’re limited in what concepts can be taught that end up being skills on completion. That’s why, in my view, whatever scores you require (if you don’t already), these scores need to be models of instruction covering different styles and scoring issues that the student can turn to for insight post-graduation.

If it wasn’t clear before, I hope it’s clear now why I said that the most important thing a student must be taught is how to teach himself. If the student can do competent score analysis, is taught the *8 Keys to Learning Professional Orchestration*, and has vast audio resources for listening, then in my view, that student has been launched with the tools needed to survive on the streets.

What I Would Not Teach In One Semester

I would not begin to attempt covering orchestral transcriptions. A number of years ago, Alexander Publishing took over the publishing of Joseph Wagner’s *Orchestration: A Practical Handbook* that is a tour de force in learning how to transcribe from piano to each section of the orchestra then to full orchestra. I realize that one competitive book covers some of these concepts, and while it’s great that it’s there for completeness (and competition), it’s too much.

I say this because in my studies with Dr. Albert Harris, he and I went through the workbook and completely did the string material. It takes one semester to just do one section of the book. At the end of the time, your skill set greatly improves, especially if you have enough electronic scoring tools to record everything you write in order to hear and compare your answers.

This is advanced stuff, and given that the system from the various associations of schools and colleges only leaves open two semesters for orchestration, I would move transcription work to either bonus online instruction or as part of a master's program.

What I Would Add For a Second Semester

Our long-range publishing goal is to provide sufficient instruction for your school to offer a minor in orchestration. As such, we have a depth of instructional materials to enable you to fulfill this goal both on campus and online.

If you could add a second semester class, I would recommend either using our *Writing For Strings*TM courseware or using *Professional Orchestration Volumes 2A and 2B, Orchestrating the Melody Within Each Orchestral Section*.

Once the student has passed through the basic instrumentation issues, instruction can now begin on learning those needed orchestral devices.

Which one you should choose really depends on the students and their post-graduation goals. The training goal of *Writing For Strings* is teaching students how to write for live players and how to make electronic strings sound live. If the students and/or the school have the proper software and electronic libraries, then go with *Writing For Strings*. If all that's available to check a score are the players in Sibelius, Finale or even Notion, I would go with *Professional Orchestration Volumes 2A and 2B*. With the combined Volume 2, the semester can be divided in thirds. Here, because work is more forthcoming for those really capable of writing for strings, I'd put half the class time on strings, and split the second half between woodwinds and brass. Since Volume 2 is completely supported with an audio package from eClassical.com you can select handful of scores from Dover Publications for more in-depth study.

What About Electronic Scoring?

You can get students scoring electronically depending on the software available, but within this is the much-needed skill of MIDI editing. With only 24 hours or so of class time, you can't cover it all, and within a 2-hour class, you can't cover instrumentation and MIDI editing, too.

The most important thing for a student is to hear even the most basic replication of how their score sounds. The players within Finale, Notion and Sibelius do an adequate job. The advantage of the players within Finale, Sibelius and Notion (even though Notion is faster to learn and use) is that the players have some reverb thus giving the work a more professional sound, with a lot more stage presence. Additionally, students who invest their time learning Finale or Sibelius are working with industry standard programs. So, the more proficient they become in either program, the greater their post graduation income earning potential.

Going Apple All the Way

Some may balk at this suggestion, but now that Apple has drastically lowered the price of Logic (<http://www.apple.com/logicstudio/>), and given the cost of a Mac Mini with 2GB of RAM, that students need to have this setup because sequencers are the new musical instrument. They've been around for two decades, and they aren't going away. Logic is now at the street price of both Finale, Sibelius and Notion. I use Sibelius. I like Notion a lot and would recommend it if only it had MIDI export. For distance education, this is a must. When they implement MIDI export, I'll recommend Notion.

But meanwhile...

For \$495, students can learn a program that will jump start their career on graduation. And it has a full notation program built in.

I realize this may not be what you want to hear (or read). Having lived in a dorm, I know how students spend their money. There's a lot of sushi (and beer!) in that allowance from home. As a teacher, I can't be responsible for how they spend their allowance, but I can set a standard that recognizes that the sequencer/computer combination is the new musical instrument of the composer, and with that, setup a value-priced solution a student can get into.

Speaking as a parent, with tuition for music majors at some private schools ranging from \$7500 to \$25,000 *per* semester, at minimum, that's \$60,000 in tuition. With tuition at that cost level, requiring the student to invest 2%-3% of that gross into his life and career, is a small investment that can yield major league returns.

To Stir the Pot Just a Little More...

If you agree with my idea that what we're calling orchestration is really instrumentation, then consider this proposal. Call it what it is and start teaching instrumentation in the first semester. Why should students go six semesters before learning about the instruments that surround them? If you start instrumentation in the first semester, then one semester can be devoted to studying each orchestral family so that by the end of the sophomore year, the student knows the strings, the brass, the woods, and the percussion. Add electronic scoring to this, and just imagine what you could be teaching in the beginning of the junior year.

Just a thought.